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MONEY,

WEIGHTS & MEASURES

OF ALL NATIONS.

By W. A. BROWNE, LL.D.

Third Edition.

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THE

MONEY, WEIGHTS, AND MEASURES

OF THE

CHIEF COMMERCIAL NATIONS

IN THE WORLD,

WITH THE

BRITISH EQUIVALENTS.

BY

W. A. BROWNE, LL.D.

THIRD EDITION.

LONDON:
EDWARD STANFORD, 6, CHARING CROSS.

1869.

232. g 96.

PREFACE.

THE high price of such books as treat of the Moneys, of Account and Exchange, and the Weights and Measures of the chief commercial nations in the world, has suggested the preparation of this pamphlet. For most of the information contained in the following pages, the Author is indebted to the courtesy of the Foreign Ambassadors resident at the British Court. His object has been to prepare from reliable sources, and issue at a cheap rate a pamphlet which might prove useful to merchants and traders, and be within the reach of all. Any one who from personal knowledge can make suggestions or corrections as to the Moneys, Weights, and Measures, of any particular country, will greatly oblige the Author by communicating with the publisher.

LONDON, 15*th January*, 1864.

THIS Edition has been compiled from a larger work of the Author's, now in the press, and entitled, "The Merchant's Handbook." From this source considerable additions have been made, and in order to give as much information in as small a space as possible, the style of the work has been slightly altered in the section on Weights and Measures. Sincere thanks are returned to those gentlemen who have so kindly sent information vouched by personal knowledge. Suggestions or corrections from any one well acquainted with particular countries, will still further oblige the Author.

C. W.

LONDON, 17*th March*, 1866.

PREFACE TO THE THIRD EDITION.

In issuing the Third Edition of this little book, I have to express my thanks to the purchasers of previous editions for their suggestions, which, as far as practicable, have been carried out. In this edition I have noted the recent change in the monetary system of Spain. The statement made in previous editions, namely, that gold coins do not form a part of the currency of the Netherlands, is adhered to in this edition, because I have satisfied myself of its correctness by recent enquiry in the Hague, Amsterdam, and Rotterdam. The gold coinage of the Netherlands was suppressed in June, 1850, and has not since been re-established. It is true that the gold pieces of 10 and 5 Guilders are sometimes met with, but they are not a legal tender, their price rises and falls with the fluctuations of the market: the average price of the 10 Gulden piece is about 9 Gulden and 65 Cents., and that of the 5 Gulden piece in proportion.

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ERRATA.

P. 50, 19th line from top, for "Tagwerk = ·842063," read Tagwerk = ·84198.

P. 51, last line, for "5 Stubchen," read 5 Viertel.

P. 52, 4th line from top, for "Lass," read Last.

P. 53, last line but one, for "11·692," read 11·652.

P. 55, 16th line from top, for "74·27213," read 44·29213.

P. 56, 10th line from bottom, for "83·332416," read 81·289657.

P. 56, 11th line from bottom, for "= ·8479," read = ·8417.

MONEY, WEIGHTS & MEASURES.

SECTION I.

MONEY.

INTRODUCTION.

MONEY or "the currency" is the standard measure of the value of commodities and the medium of exchanging them one for another. It is called a measure of value because the price of everything bought and sold is measured by it.

Pure gold and silver are too soft to serve as media of exchange, and for that reason they are *usually alloyed*, that is, mixed with a small proportion of harder or less valuable metals.

The phrase, "moneys of account," means the denominations and divisions of money in which accounts are kept. The moneys of account may either be identical with the current coins, or may bear definite proportions to them.

Exchange signifies the giving or receiving, in return for a sum of money in the currency of one country, an equivalent sum in the currency of another country.

The PAR OF EXCHANGE between two countries using the same metal as their standard of value is that sum of money of either country which contains an exactly equal weight of gold or silver of the same purity.

It is the equivalent intrinsic value of a given unit of the currency of one country estimated in the currency of another country, both using the same metal as a standard.

The COURSE OF EXCHANGE may be defined to be the current prices of exchange, or the prices given from time to time in one country for Bills of Exchange payable in the currency of another. It is the *variable* price (estimated in the currency of one country) which is given for a *fixed* sum in the currency of another country.

THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND.

The money of account consists of pounds, shillings, and pence sterling.* It is as follows :—

* The term *sterling* distinguishes the currency of Great Britain and Ireland from that of the British Colonies, and from some Continental moneys bearing the same names. *Sterling* is an abbreviation of *Easterling*, the name by which *Eastphalian* traders, the ancestors of the merchant princes of Hamburg, were known in England. Their money was of the finest quality, and hence Easterling shortened into sterling became a general term for *pure* money.

				French value. Francs.	Centimes.
4 farthings	= 1 penny	Marked *d.*	=	0.	10
12 pence	= 1 shilling	,, *s.*	=	1	25
20 shillings	= 1 pound sterling	,, £*	=	.25	0

The currency of the United Kingdom consists of gold, silver, and copper coins, and of Bank Notes, exchangeable on demand at their full nominal value for gold and silver.

GOLD COINS.

The gold coins are the sovereign of 20s. and the half sovereign of 10s. Double sovereigns are also authorised, but there are none of them in circulation.

The fineness of gold is expressed in *carats*. As applied to gold the term *carat* signifies the *twenty-fourth part* of any given weight of that metal or of its alloy.

The gold used in the coinage of the United Kingdom is $\frac{11}{12}$ths pure, that is, it consists of 22 (out of 24) parts of pure gold and 2 parts of alloy, the alloy being a mixture of silver and copper.

SILVER COINS.

The silver coins are the crown of 5s., the half-crown of 2s. 6d., the florin of 2s., the *shilling* piece, the *sixpenny*, the *fourpenny*, and the *threepenny pieces*. A few *twopenny* and *penny pieces*, known as *Maundy money*, and distributed as alms by the Sovereign, are also coined, but they are not in general circulation.

BRONZE OR COPPER COINS.

The copper coins are the penny, the half-penny, and the farthing.

A bronze coinage was introduced in 1860. The bronze used in this coinage is composed of 95 parts by weight of copper to 4 of tin and 1 of zinc.

BANK NOTES.

Bank of England Notes for £5, £10, £20, £50, £100, £500, and £1000. There are likewise the notes of several Banks of issue both in Ireland and Scotland, as also the provincial towns of England, varying from £1 upwards, but these

---

* The letters *£ s. d.* (the initials of the Latin words *libræ, solidi,* and *denarii*) are used in accounts to denote respectively *pounds, shillings,* and *pence*, and are either written over or at the side of those denominations. Farthings are generally written as fractions of a penny, and are seldom considered as integers, but when they are the letter q. (the initial of the Latin *quadrantes*) is written over them. As fractions they are written as follows:—$\frac{1}{4}$ = 1 farthing; $\frac{1}{2}$ = 2 farthings or 1 halfpenny; $\frac{3}{4}$ = 3 farthings.

are not so freely taken except in the locality where they are issued; and in London the notes of Irish and Scotch banks are at a slight discount.

IRELAND.

(*See* APPENDIX I.)

THE CHANNEL ISLANDS.

VIZ.,

GUERNSEY, JERSEY, ALDERNEY, AND SARK.

The denominations of money are *pounds*, *shillings*, and *pence*, *Channel Island currency*. £1 sterling is reckoned equal to £1 1s. 8d. Channel Island currency. That is, the exchange is between 8 and 9 per cent. in favour of England.

FRANCE.

French value.	*Systematic name.*		*Approximate English value.*
	1 centime	=	$\frac{19}{100}$d.
100 centimes =	1 franc	=	9½d.

In France, silver is the legal standard of value and the principal medium of exchange. The value of the franc in silver is equal to 9·384d. sterling, and 25 francs 57·2 centimes are the equivalent value in silver of £1 sterling. The value of the franc in gold is 9·516d. sterling, and 25 francs 22 centimes are the equivalent value in gold of £1 sterling; thus there is a per centage in favour of gold.

The French coinage is based upon the unit of weight, the gramme. A franc weighs 5 grammes.

GOLD COINS.

The gold coins are pieces of 100, 50, 20, 10, and 5 francs. The 20 franc piece is called a Napoleon. The gold coinage is nine-tenths fine, that is, it contains 900 parts by weight of pure gold and 100 parts of alloy.

SILVER COINS.

The silver coins are pieces of 5, 2, and 1 francs, and the ½ franc and the 20 centime piece. The silver currency of France is nine-tenths fine, that is, it contains 900 parts by weight of pure silver and 100 parts of alloy.

COPPER COINS.

The copper or bronze coins are pieces of 10, 5, 2, and 1 centimes, which weigh respectively 10, 5, 2, and 1 grammes.

The bronze (or copper) coins in most general use are the 10 and 5 centime pieces. The 2 centime piece is seldom met with, and the 1 centime piece is still more uncommon.

The copper coinage of France is $\frac{95}{100}$ths fine.

BANK NOTES.

The only Bank of issue is the Bank of France, which issues notes of 50, 100, 500, and 1,000 francs. These can be changed into gold and silver at their full nominal value.

The par of Exchange with London is 25 francs for £1 sterling. At this rate £1 English equals 25 francs; 5s. equals 6fr. 25c.; 1s. equals 1fr. 25c.; 1d. equals 10c.

RUSSIA.

Russian value.		*Systematic name.*		*Approximate English value.*
100 Copecks	=	1 Silver Ruble	=	3s. 2d.

GOLD COINS.

The gold coin is the *Half-imperial*, equal to 5 rubles 15 copecks, and worth 16s. $3\frac{7}{10}$d. The Half-imperial contains $\frac{8}{96}$ths, or 135 dolis, of pure gold, and $\frac{8}{96}$ths, or $12\frac{3}{11}$ dolis, of alloy, and weighs $147\frac{8}{11}$ dolis.

SILVER COINS.

The silver coins are the *Ruble*, worth 3s. 2d.; the *Poltinnick* of 50 copecks, worth 1s. 7d. sterling; the *Tchetwertak* of 25 copecks, worth $9\frac{1}{2}$d. sterling; the *Dwougriwenny* of 20 copecks, worth $7\frac{1}{2}$d. sterling; the *Griwennick* of 10 copecks, worth $3\frac{4}{5}$d. sterling; and the *Priatachek* of 5 copecks, worth $1\frac{9}{10}$d. sterling. The silver coins are of the standard of $83\frac{1}{3}$ parts of pure silver and $12\frac{2}{3}$ alloy.

COPPER COINS.

The copper coins are the 5 *Copeck Piece*, worth $1\frac{9}{10}$d. sterling; the 3 *Copeck Piece*, worth $1\frac{7}{10}$d. sterling; the 2 *Copeck Piece*, worth $\frac{11}{20}$d. sterling; the 1 *Copeck Piece*, worth $\frac{11}{10}$d. sterling; the $\frac{1}{2}$ *Copeck Piece*, worth $\frac{11}{100}$d. sterling; and the $\frac{1}{4}$ *Copeck Piece*, worth $2\frac{11}{100}$d. sterling.

Besides these coins there are also some old coins in circulation which have not been withdrawn, viz., in silver the $1\frac{1}{2}$ *Ruble Piece*, the 30 *Copeck Piece*, and the *Piatialtynny* = 15 copecks. In copper the *Grivna*, formally equal to 10 copecks, but now having the nominal value of 3 copecks; the *Piatak*, formally equal to 5 copecks, now nominally worth $1\frac{1}{2}$ copecks; the *Grosch*, formally equal to 2 copecks, now nominally worth $\frac{1}{2}$ copeck; and the *Copeck*, now nominally worth $\frac{1}{4}$ copeck.

BANK NOTES.

The Bank Notes of Russia are at a discount as compared with *specie*. They are notes of 1, 5, 10, 20, 50. 100, 1000, and 10000 rubles.

The par of exchange with London is 3s. 2d. per silver ruble, and at that rate £1 English, equals 7 rubles 31$\frac{1}{2}$ copecks; 5s. equals 1 ruble 57$\frac{1}{2}$ copecks; 1s. equals 31$\frac{1}{2}$ copecks; 1d. equals 2$\frac{3}{4}$ copecks.

AUSTRIA.

Austrian value.	*Systematic name.*	*Approximate English value.*
100 New Kreuzers	= 1 New Florin	= 1s. 11$\frac{1}{2}$d.

The currency is now based upon what is called the 45 *Florin Standard*, that, namely, in which a new metric pfund of 500 grammes of fine silver is coined into 45 new florins. The florin is equal to 2$\frac{1}{2}$ French francs, or to 1s. 11$\frac{1}{2}$d. sterling. Silver is the standard precious metal used in the currency.

SILVER COINS.

The silver coins are the *Double Thaler* and the *Thaler*, of the Zollverein Union, equal to 3 florins and 1$\frac{1}{2}$ florins respectively (i.e., to 5s. 10d. and 2s. 11d. sterling); the 2 *Florin Piece*, worth 3s. 10$\frac{1}{2}$d. sterling; and the *Florin*, worth 1s. 11$\frac{1}{2}$d. sterling; the $\frac{1}{2}$ *Florin*, worth 5$\frac{3}{4}$d.; and the 10 and 5 *Kreuzer Pieces*, worth respectively 2$\frac{1}{2}$d. and 1$\frac{1}{4}$d. sterling; and the 1 *Kreuzer Piece*, worth $\frac{1}{20}$d. sterling.

GOLD COINS.

The gold coins are the *Crown* of 13$\frac{1}{3}$ florins, worth £1 6s.; and the *Half-crown* of 6$\frac{2}{10}$ florins, worth 10s. 3d. sterling.

COPPER COINS.

The copper coin is the *Kreuzer*, a little less in value than an English farthing ($\frac{1}{30}$d.).

PAPER MONEY (*Wiener Währung*).

Practically the chief medium of exchange is a paper currency consisting of Bank Notes of 5, 10, 100, and 1000 florins, which the National Bank undertakes to exchange on demand for specie at their full nominal value. The paper money fluctuates in value from day to day, and is generally at a discount. Venetia is the only province of the empire in which the new silver florin is in circulation, the paper florin being used everywhere else.

Strangers in Austria should change their money for South German thalers and new gold crowns, as these pass current in Austria and all over Germany.

The old value of Austrian money was called the *Convention*, or 20 *Florin Standard*. It was introduced in 1753, in accordance with a Convention between Austria and Bavaria. By that Convention a Cologne mark weight, Hamburg standard, of fine silver (3608 grains Troy) was coined into 20 florins. This

continued to be the value of the currency of Austria till 1858. In that year the coinage was altered, and the 45 *Florin value*, with its decimal divisions, was introduced, and 105 of the new florins were made equal to 100 of the old ones. Coins of the old 20 florin standard are still in circulation and can be exchanged for the new currency at fixed rates :—

Taking the par of exchange as 1s. 11¼d. sterling for 1 florin. £1 English equals 10fl. 28½n. kr.; 5s. equals 2fl. 57½n. kr.; 1s. equals 51½n. kr.; 1d. equals 4½n. kr.

NORTH GERMANY, OR NORTH *ZOLLVEREIN STATES, viz.,

THE KINGDOMS OF PRUSSIA, SAXONY, AND HANOVER ELECTORATE OF HESSE, GRAND DUCHY OF SAXONY, DUCHIES OF SAXE-ALTENBURG, SAXE GOTHA, BRUNSWICK, OLDENBURG, WITH BIRKENFELD, ANHALT-DESSAU-GOTHA, AND ANHALT-BERNBURG, AND THE PRINCIPALITIES OF SCHWARTZBURG-SONDERHAUSEN AND SCHWARTZBURG-RUDOLSTADT, WALDECK, AND PYRMONT, REUSS (elder branch), REUSS (younger branch), SCHAUMBURG-LIPPE AND LIPPE.

North German value.		*Systematic name.*	*Approximate English value.*
12 Pfennige	= 1 New Groschen	=	1⅛d.
30 New Groschen	= 1 Thaler	=	2s. 11d.

GOLD COINS.

The gold coins are the *Frederic-d'or*, of 5 Thalers, 20 Silber Groschen; the *Double Frederic-d'or*, of 11 Thalers 10 Silber Groschen; the *Half-Frederic-d'or*, of 2 Thalers 25 Silber Groschen; the *Union Crown*, equal to 9 Thalers 6 Silber Groschen; the *Union Half-crown*, equal to 4 Thalers 18 Silber Groschen, sterling; the *Pistole* of Denmark, Hanover, and Brunswick, equal to 5 Thaler 15 Silber Groschen; the *Double Pistole* of Denmark, Hanover, and Brunswick, equal to 11 Thalers.

SILVER COINS.

The silver coins are the *Thaler;* the *Double Thaler;* the ⅓ *Thaler*, or piece of 10 Silber Groschen; the ¼ *Thaler*, or piece of 5 Silber Groschen; the piece of 2½ Silber Groschen (1/12 *Thaler*); and the *Silber Groschen.*

Hanover, Brunswick, Hesse, and some of the other States

* The *Zollverein* (customs-union) is a league of the states of Germany, formed in 1833, for assimilating, uniting, and simplifying the fiscal arrangements of the several states of Germany. It came into operation on the 1st January, 1834. It abolished all restrictions on internal communication, established a common system of duties on exports and imports, and provided for a common system of money, weights, and measures. It now embraces almost all the states of Germany, except Oldenburg and the Hanse Towns.

have each their own peculiar coins, which circulate along with the coins above enumerated; but the most usual medium of payments in all the States of North Germany is the Prussian money above given.

Prussia issues a Paper Currency, consisting of Bank Notes and Treasury Bonds, which are everywhere accepted at their full nominal value. The Bank Notes are 1, 5, 10, 20, 25, 50, and 100 Thalers.

Taking 2s. 11d. sterling as the value of a Thaler, we have £1 equal to 6th. 25silbg. 8$\frac{4}{7}$pfg.; 5s. equal to 1th. 21silbg. 5$\frac{1}{7}$pfg.; 1s. equal to 10silbg. 3$\frac{3}{7}$pfg.; 1d. equal to 10$\frac{2}{7}$pfg.

SOUTH GERMANY, OR, SOUTH ZOLLVEREIN STATES, VIZ.:

THE KINGDOMS OF BAVARIA AND WURTEMBURG, GRAND DUCHIES OF BADEN AND HESSE DUCHY OF SAXE-COBURG; THE HEREDITARY PRUSSIAN STATES, DUCHY OF NASSAU, PRINCIPALITY OF SCHWARTZBURG-RUDOLSTADT, ELECTORATE OF HESSE-HOMBURG, AND THE FREE CITY OF FRANKFORT.

South German value.		*Systematic name.*		*Approximate English value.*
4 Pfennige	=	1 Kreuzer	=	¼d.
60 Kreuzers	=	1 Florin	=	1s. 8d.

The following are the chief coins current in the South German States.

GOLD COINS.

The gold coins are the *Union Crown*, equal to 16 Florins 6 Kreuzers; *Union Half-crown*, equal to 8 Florins 3 Kreuzers; *English Sovereign* equal to 11 Florins 36 Kreuzers; *Prussian Frederic-d'or*, equal to 19 Florins 50 Kreuzers; *Pistole of Denmark*, *Hanover* and *Brunswick*, equal to 19 Florins 38 Kreuzers; *Double Pistoles*, equal to 19 Florins 16 Kreuzers; *Dutch* 10 *Guilder piece*, equal to 9 Florins 44 Kreuzers;* *Dutch* 5 *Guilder piece*, equal to 4 Florins 72 Kreuzers; *French Napoleon* of 20 Francs, equal to 9 Florins 25 Kreuzers; *The Ducat*, equal to 5 Florins 33 Kreuzers.

SILVER COINS.

The Union Thaler, = 1 Florin, 45 Kreuzers; *The Double Thaler*, = 3 Florins, 30 Kreuzers; 2 *Florin Piece*; *Florin* of 60 Kreuzers; *Half Florin* of 30 Kreuzers; *Quarter Florin* of 15 Kreuzers; 6 *Kreuzer Piece*; 3 *Kreuzer Piece*; *Kreuzer*.

* Although gold coins are no longer issued from the Dutch Mint they have not altogether disappeared from European circulation.

BANK NOTES.

The chief Bank Notes current in the South German States are Bavarian Notes of 10 and 100 Florins. Notes of Wurtemburg, Baden, Hesse and Nassau of 1, 2, 5, 10, 50, and 100 Florins. Notes of Frankfort for 5, 10, 35, 50, 100, and 500 Gulden or Florins. Notes of Prussia, Saxony and Brunswick for 1, 5, 10, 20, 25, 50, and 100 Thalers.

Exchanging English Money at 1s. 8d. for a South German Florin; we have £1 equal to 12fl.; 5s. equal to 3fl.; 1s. equal to 36 Kreuzers; 1d. equal to 3 Kreuzers.

MECKLENBURG-SCHWERIN, AND MECKLENBURG-STRELITZ.

Mecklenburg value.		*Systematic name.*		*Approximate English value.*
12 Pfennige	=	1 Schilling	=	$\frac{35}{48}$d.
48 Schillings	=	1 Thaler	=	2s. 11d.

Formerly the denominations of money in Mecklenburg were the following:—

12 Pfennige	=	1 Schilling	=	$\frac{7}{8}$d. sterling.
16 Schillings	=	1 Mark	=	1s. 2d. „

SILVER COINS.

The *Thaler;* the $\frac{2}{3}$ *Thaler Piece;* and the $\frac{1}{3}$ *Thaler Piece.*

The following old coins are also in circulation:—

The *Mark;* the 2 *Mark;* the 8, 4, and 2 *Schilling Pieces;* and the 6 and 3 *Pfennige Pieces.*

HAMBURG.

The monetary system of Prussia as given under the head of "North Germany," is being introduced in Hamburg; but accounts are still kept in the old denominations of schillinge and marks.

Humburg value.		*Systematic name.*		*Approximate English value.*
12 Pfennige	=	1 Schilling	=	$\frac{5}{6}$d.
16 Schillinge	=	1 Mark	=	1s. $1\frac{1}{3}$d.

Reckonings and payments are also recorded in Thalers of 3 Marks of 16 Schillinge.

The money of Hamburg has a twofold valuation, the one called *Currency* and the other *Bank* value. In *currency value* the Cologne Mark weight, (Hamburg standard), viz., 3608 grains Troy of pure silver, was coined till 1856 into 34 Marks, and since that date into 35 Marks. In *bank value* the same weight of pure silver is supposed to be coined into $27\frac{3}{4}$ Marks.

Currency value refers to the coins in actual circulation. *Bank* value refers to the credits standing in the books of the Hamburg Bank. Those credits are represented by silver bullion deposited in the bank.

Taking the proportion of gold to silver as 15½ to 1, a Mark, *Bank value* is equal to 1s. 5·82d. sterling; and a Mark, *Currency value*, is equal to 1s. 2·13d. sterling. The *Bank value* is used in wholesale transactions and in exchanges, and the Currency value is employed in small transactions. Large payments in trade are always made through the bank by transferring the sum from the accounts of the buyer to those of the seller; such accounts being kept in *Schillinge* and *Marks*, *Bank* value.

GOLD COINS.

The gold coins are the *Pistole* and the *Ducat*. The Pistole is equal to 10 Marks, 14 Schillinge (*Bank* value). The Ducat is equal to 6 marks, 4 Schillinge, Bank value, or $100\frac{1}{16}$ Schillinge, Currency value, and is worth about 9s. 4d. sterling.

SILVER COINS.

The silver coins are the *Double Dollar* equal to 5 marks, (currency value); the *Dollar* of 2½ marks; the *Mark;* the 8 *Schilling Piece;* the 4 *Schilling Piece;* the 2 *Schilling Piece*; the *Schilling*; the ½ *Schilling*, or *Sechsling;* and the 4 *Schilling*, or *Dreiling;* the 1, ½, and ¼ *Schilling* being the coins most in use. The standard of purity is not the same for all the silver coins; thus, the *Mark* contains 750 parts by weight out of 1000 of pure silver, the 8 schilling piece contains 625, the 4 schilling piece 562½, the 2 *Schilling Piece* 437½, and the 1 schilling piece 250 of such parts.

The difference between the *Bank value* and the *Currency value* is called the *Bank Agio*, and is perpetually varying with the price of pure silver.

Taking the value of the *current* mark as 1s. 1½d. sterling, we have £1 English equal to 18 marks; 5s. equal to 4½ marks; 1s. equal to 14 schillinge; 1d. equal to 1 schilling 2⅔ pfennige.

BREMEN.

Accounts are kept in *Groots* and *Thalers* (Rix Dollars).

Bremen value.		*Systematic Name.*		*Approximate English value.*
5 Schwaren	=	1 Groot	=	$\frac{11}{20}$d.
72 Grootes	=	1 Rix-dollar	=	3s. 3⅔d.

GOLD COINS.

The gold coins are Danish, Hanoverian, and other *Pistoles*, of 5 Thalers, and Ducats 2⅔ Thalers at an agio or premium of

a variable per centage. The English Sovereign passes current at about 6 Thalers 10 to 12 Groots.

SILVER COINS.

The silver coins are the $\frac{1}{4}$ Thaler of 36 Groots; the $\frac{1}{6}$ *Thaler* of 12 Groots, worth 6$\frac{3}{4}$d. sterling; the 6 Groot Piece, worth $3\frac{3}{10}$d. sterling; the Groot, worth about $\frac{1}{2}$d. sterling.

COPPER COINS.

The copper coins are pieces of 2$\frac{1}{2}$ and 1 Schwaren.

At the rate of about 609$\frac{1}{2}$ Thalers or Rixdollars for £100 sterling, or 39$\frac{3}{4}$d. for a Rixdollar. £1 sterling is equal to 6$\frac{1}{2}$ Rixdollars; 5s. is equal to 1 Rixdollar 45 Grootes; 1s. is equal to 23 Grootes 5 Schwaren nearly.

LUBEC.

Lubec value.		*Systematic name.*		*Approximate English value.*
12 Pfennige	=	1 Schilling	=	$\frac{3}{4}$d.
16 Schillinge	=	1 Mark	=	1s. 1$\frac{1}{2}$d.
3 Marks	=	1 Thaler	=	3s. 4d.

SPAIN.

A decree dated 21st October, 1868, ordered the assimilation of the money of Spain to that of France, Italy, Belgium, and Switzerland. The Peseta of 4 Reals, which is equivalent to a franc, was declared the monetary unit with subdivisions as follows:—

Spanish value.		*Systematic name.*		*English value.*
	=	1 Centime	=	$\frac{1}{4}$d.
100 Centimes	=	1 Peseta	=	9$\frac{1}{2}$d.

The old currency, which is being called in, is as follows:—

Spanish value.		*Systematic name.*		*Approximate English value.*
100 Centimes	=	1 Real	=	2$\frac{1}{2}$d.
10 Reals	=	1 Escudo*	=	2s. 1d.

GOLD COINS.

The gold coins are the (1) *Onza* or doubloon of 320 reals; (2) the *Half-Onza* of 160 reals; the *Isabel* of 100 reals; (3) the *Quarter-Onza* of 80 reals; (4) the *One-eight-Onza* of 40 reals; the 21$\frac{1}{2}$ *real piece;* and (5) the *Dollar* of 20 reals.

SILVER COINS.

The silver coins are the *Dollar* (duro) of 20 reals; the *Escudo* of 10 reals; the *Peseta de Columnas* of 5 reals; the *Peseta* of 4 reals; the 2$\frac{1}{2}$ *Real Piece;* the 2 *Real Piece*, and the 1 *Real Piece.*

* In 1865 a Royal decree was issued, making the Escudo the highest unit of account. Before that date the real and the centime were the denomination used in keeping accounts.

(1) Quadruple-pistole; (2) or Media-Onza or Half-doubloon; (3) or or Doubloon de Achenta; (4) or Cudrenta or Doubloon de Escudo; pronilla; Escudito, Durillo, or Doubloon de Vienti.

COPPER COINS.

The copper coins are the *Half-real;* the *Quarter-real;* and also pieces 2 Cuartos,* and 1 Cuarto. These coins are gradually disappearing from circulation.

BANK NOTES.

The notes of the bank of Spain are current only in Madrid, the capital town of each province has a bank of issue. The bank notes in circulation vary from 100 reals to 4,000 reals.

GIBRALTAR.

The denominations of money used in keeping accounts are *Dollars, Reals,* and *Quartos,* and sometimes Dollars and Cents, as follows :—

Gibraltar value.		*Systematic Name.*		*British Sterling value.*
16 Quartos	=	1 Real	=	4½d.
12 Reals	=	1 Dollar	=	4s. 2d.
100 Cents	=	1 Dollar	=	4s. 2d.

Since 1825 the Revenue accounts of the Garrison have been kept in *pounds, shillings,* and *pence* sterling.

GOLD COINS.

The gold coin is the *Doubloon* of Spain and its sub-divisions. The Doubloon is rated at 16 Dollars, or £3 6s. 8d. sterling, and is the chief medium in large payments.

SILVER COINS.

The silver coin is the *Dollar* of Spain and it sub-divisions. The Dollar is rated at 4s. 2d. sterling.

COPPER COINS.

The copper coins are the *Quartos,*† which are coins of different countries, and are merely counters, that is, they represent aliquot parts of the Dollar.

PORTUGAL.

The unit of account is the *Rei,* worth $\frac{4}{7}$d. sterling, and in recording payments and receipts no other denomination of money besides Reis is used.

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* 8½ Cuartos are equal to 1 real.

† A little more than ¼d. sterling.

In accounts the following notation is met with:—The symbol $ is used to denote the thousands' place, a colon (:) the place of millions (contos), and a full point (.) the place of thousands of millions. Thus 1000000000 (or one thousand millions of Reis) would be 1.000:000$000.

In ordinary language a Mil-reis (1$000) and a Conto (1:000 $000) are spoken of; but practically the only denomination of money of account is the Rei with the above method of noting the thousands, millions, and thousands of millions.

A *Moidore* is equal to 4$000 Reis and is worth £1. 1s. 3d. sterling. A *Cruzado* = $400; a *Cruzado Novo*, or *Pinto* = $840. A *Quartinho* = 1$200; a *Testo* or *Testoon* = $100, and a *Ventem* = 20 Reis.

GOLD COINS.

The gold coinage of Portugal contains 916⅔ of pure gold, and 83⅓ of alloy. The gold coins are as follows:—The *Corôa* (Crown) which weighs 17 Grammes, and 735 Milligrammes, is equal to 10000 Reis (10$000) and is worth £2. 4s. 5½d. sterling; the *Meia Corôa* (half-crown) which weighs 8 Grammes and 868 Milligrammes is equal to 5000 Reis (5$000), and is worth £1. 2s. 2¾d. sterling; the *Quintos de Corôa* (⅕ of a Crown), which weighs 3 Grammes and 547 Milligrammes, is equal to 2000 Reis (2$000), and is worth 8s. 10⅘d. sterling; the *Decimos de Corôa* (1/10 of a Crown) which weighs 1 Gramme, 774 Milligrammes, is equal to 1000 Reis (1$000) and is worth 4s. 5½d. sterling; the *Peça Antiga* (old piece), formerly called a *Johanese* or *Joe*, which weighs 14 Grammes and 188 Milligrammes, is equal to 8000 Reis (8$800) and is worth £1. 15s. 6½d. sterling; *Meia Peça Antiga* (half piece) which weighs 7 Grammes and 94 Milligrammes, is equal to 4000 Reis (4$000) and is worth 17s. 9½d. sterling.

The British Sovereign, which weighs 7 Grammes and 981 Milligrammes, is rated at 4500 Reis (4$500).

SILVER COINS.

The silver coins are the *Cincotestoes* (5 Testoons) which weighs 12·5 Grammes, is equal to 500 Reis (5$200) and is worth 2s. 2¾d. sterling; the *Doistestoes* (2 Testoons) which weighs 5 Grammes, is equal to 200 Reis ($200) and is worth 10⅘d. sterling. The *Testao* (the Testoon) which weighs 2·5 Grammes, is equal to 100 Reis ($100) and is worth 5½d. sterling. *Meia Testao* (Half Testoon) which weighs 1·25 Grammes, is equal to 50 Reis ($050) and is worth 2¾d. sterling.

BILLON COINS.

In billon there is the *Potacao* (of 40 Reis) worth 2⅘d. sterling.

COPPER COINS.

The copper coins are the *Ventem* of 20 Reis, worth $1\frac{1}{16}$d. sterling; the *Meio-Ventem* of 10 Reis, worth $\frac{1}{32}$d. sterling; the *Cinco-Reis* of 5 Reis, worth $\frac{3}{160}$d. sterling, and the 3 *Reis Piece.*

Taking the par of exchange as $53\frac{1}{8}$d. sterling for a Milreis (1000 reis), we have £1 sterling equal to 4,500 Reis ($4\frac{1}{2}$ milreis); 5s. equal to 1,125 Reis; 1s. equal to 225 Reis; 1d. equal to $18\frac{3}{4}$ Reis.

THE NETHERLANDS.

Dutch value.		*Systematic Name.*		*Approximate English value.*
100 Cents	=	1 Guilder or Florin	=	1s. 8d.

The gold coinage in Holland was suppressed by law in 1850; it consisted of the 10 *Gulden* and 5 *Gulden Pieces.*

SILVER COINS.

The silver coins are the $2\frac{1}{2}$ *Gulden Piece;* the *Florin* or *Guilder*; and the $\frac{1}{2}$ *Florin.* These silver coins are of the fineness of $\frac{945}{1000}$th Troy. There are also in silver of a lower standard, the 25, 10, and 5 *Cent Pieces.*

COPPER COINS.

The copper coins are the *Cent* and the $\frac{1}{2}$ *Cent*, worth $\frac{1}{2}$d. and $\frac{1}{10}$d.

The above form the proper currency of the Netherlands, but the following old coins are occasionally met with in the circulation:—

The *Gold Ducat*, worth about 9s. $4\frac{1}{2}$d. sterling; the *Silver Ducatoon*, worth about 5s. $3\frac{3}{4}$d. sterling; and the *Rixdollar*, worth about 4s. 2d. sterling.

At the rate of 1s. 8d. sterling for a Guilder, £1 sterling is equal to 12 Guilders or Florins; 5s. is equal to 3 Florins; 1s. is equal to 60 Cents; 1d. is equal to 5 Cents.

BELGIUM.

Belgium value.		*Systematic name.*		*Approximate English value.*
100 Centimes	=	1 Franc	=	$9\frac{1}{2}$d.

The *Franc* is worth 9·69d., and the *Centime* ·0969d. sterling. It is $\frac{9}{10}$ths fine, and contains 69·4 grains of pure silver. The Centime weighs 2 Grammes, or 30·864 Troy grains of copper.

SILVER COINS.

The silver coins are the 5, $2\frac{1}{2}$, 2, 1, and $\frac{1}{2}$ Franc pieces. They are all of the same standard of weight and fineness as those of France.

COPPER COINS.

The copper coins are pieces of 1, 2, 5, and 10 *Centimes*.

Neither gold nor billon coins form any part of the present currency of Belgium.

French gold coins are often met with, but are not a legal tender in payment.

Coins of 50 Centimes are not a legal tender for payment of more than $\frac{1}{10}$th of the sum due.

In copper coins not more than 5 Francs' worth are legal at any single payment.

The Belgium value of English money is the same as the French value.

DENMARK.

Danish value.		*Systematic name.*		*Approximate English value.*
96 Skilling	=	1 Rigsdaler or Daler.	=	2s. $2\frac{7}{20}$d.

The unit of the monetary system is the *Rigsdaler* or *Daler* till recently officially called "Rigsbankdaler," but this term is now never used. Sixteen Skilling are equal to 1 Mark, and consequently 6 Marks are equal to 1 Rigsdaler.

Silver is the standard of the currency in Denmark.

GOLD COINS.

The gold coins are *Christians d'ors* and *Fredericks d'ors*, equal to 7 Dalers 36 Skilling. These are common in North Germany, but rare in Denmark itself.

BANK NOTES.

The Bank Notes are 1, 5, 10, 25, 40, 50, and 100 Gulden.

SILVER COINS.

The silver coins are the *Dobbeltdaler*; the *Daler*; the $\frac{1}{2}$ *Daler* or 48 *Skilling Piece*; the 16 *Skilling Piece*; and the 4 *Skilling Piece*.

The pieces of 48 Skilling, 16 Skilling, and 4 Skilling, though silver, are of an inferior standard. Dalers and Dobbeltdalers are coined at the rate of $18\frac{1}{2}$ Dalers from the Cologne Mark weight (3608 grains Troy) of fine silver, while the pieces of 48, 16, and 4 Skilling are coined at the rate of 20 Dalers from the same weight.

BRONZE COINS.

The bronze coins are the *Skilling Piece* and the $\frac{1}{2}$ *Skilling Piece*.

The currency of Holstein consists chiefly of Hamburg and Lubec coins, and this is what is meant by the phrase, "Sleswick-Holstein currency."

BANK NOTES.

The National Bank of Copenhagen issues notes for 1, 5, 10, 50, and 100 Rigsdalers, which are always convertible into specie at their full nominal value.

At 2s. 2½d. for a Rigsdaler, £1 sterling is equal to 9 Rigsdalers 10$\frac{7}{13}$ skilling; 5s. is equal to 2 Rigsdalers 26$\frac{2}{13}$ skilling; 1s. is equal to 43$\frac{3}{13}$ Skilling; 1d. is equal to 3$\frac{9}{13}$ skilling.

SWEDEN.

The denominations of money in Sweden are the *Öre* and the *Riksdaler*.

Swedish value.		*Systematic name.*		*Approximate English value.*
100 Öre	=	1 Riksdaler	=	1s. 1½d.

GOLD COINS.

There are no gold coins in the present legal currency of Sweden. Swedish gold Ducats have been coined, but they are rarely met with.

SILVER COINS.

The silver coins are the 4, the 2, and the 1 *Ricksdaler Pieces*, the 25 Öre piece, and the 10 Öre piece.

The pieces of 4, 2, and 1 Riksdaler are not very common.

COPPER COINS.

The copper coins are pieces of 5, 2, 1 and ½ Öre.

At the rate of £1 sterling for 18 Riksdalers, 5s. is equal to 4 Riksdalers 50 öre; 1s. is equal to 90 Öre; 1d. is equal to 7½ Öre.

NORWAY.

Norwegian value.	*Systematic name.*		*Approximate English value.*
24 Skillingen	1 Ort	=	10$\frac{3}{5}$d.
5 Ort	1 Species-Daler	=	4s. 5½d.

It is proposed to introduce the decimal system in Norway, and the subject is still under the consideration of the Storthing.

SILVER COINS.

The silver coins are the *Species-Daler*, and the Pieces of ½, ¼, $\frac{1}{10}$, and $\frac{1}{15}$ of a Species-Daler. In small silver money *(Skillemynt*)* there are Pieces of 4 and 2 Skillengen, worth respectively 1$\frac{1}{5}$d. and $\frac{2}{5}$d. sterling.

* The term *skillemynt* denotes small copper money of 2 and 1 Skillingen, as well as small silver money of 4 and 2 Skillingen.

COPPER COINS.

The copper coins are the 2, the 1, and the ½ *Skilling Pieces.*

There are no gold coins in the currency of Norway, and for sums above 1 Ort, Paper money is the chief medium of payment.

BANK NOTES.

The Bank Notes in circulation are those of 50, 10, 5, 1, ½ and ¼ Species-Daler.

The Norwegian Bank exchanges these notes for *specie* at a rate varying from 110 to 116 Paper-Dalers for 100 Species-Dalers.

At 4s. 5½d. for a Species-Daler, £1 sterling is equal to 4¼ Species-Dalers; 5s. is equal to 1 Species-Daler 15 skillingen; 1s. is equal to 1 Ort 3 skillingen; 1d. is equal to 2¼ Skillingen.

SWITZERLAND.

Swiss value.		*Systematic Name.*		*Approximate English value.*
100 Rappen or Centimes	=	1 Franc	=	9½d.

SILVER COINS.

The silver coins are the 5, 2, 1, and ½ *Franc Pieces.*

GOLD COINS.

Switzerland has at present* no gold currency of her own, but the gold coins of France are in general circulation at their full value.

BILLON COINS.

The billon or mixed metal coins are the *Zweïtbatzen* or 20 *Centime Piece*, the *Batzen* or 10 *Centime Piece*, and the *Halbbatzen* or 5 *Centime Piece.*

COPPER COINS.

The copper coins are the *Zweier* or 2 *Rappen Piece* and the *Rappe.* No one is obliged to receive in payment more than 20 Francs in value of the silver coins under the 1 Franc piece, more than 20 Francs worth of billon or rappen, or more than 2 Francs worth of copper.

The Swiss value of English money is about the same as the French value, which see.

* It is not improbable that Switzerland may establish a gold currency of her own.

ITALY.

When the Italian States were united into one kingdom under King Victor Emmanuel, one uniform system of money as well as of weights and measures began to be gradually introduced, so that the money in which accounts are kept, both in public and private establishments, is as follows. (See, however, the tables of money for Rome, the Two Sicilies, and Tuscany.)

Italian value.		*Systematic name.*		*Approximate English value.*
100 Centimes	=	1 Lira	=	9½d.

GOLD COINS.

The gold coins are the 100, 80, 50, 20, and 10 *Lire Pieces.**

SILVER COINS.

The silver coins are pieces of 5, 2, and 1 Lire and 50 and 25 Centimes.

BILLON COINS.

In Lombardy and Piedmont there are also still extensively circulated some old pieces in Billon, which, as they fall in readily enough with the decimal system, have not yet been called in. These are the *Mouta* and the *Half-Mouta* equal respectively to 40 and 20 Centimes.

COPPER COINS.

The copper coins are pieces of 1, 3, and 5 Centimes.

SARDINIA (ISLAND OF).

The denominations of money used in reckoning and accounts are now the same as those of Italy, and the currency consists partly of Italian coins, and partly of French coins.

ROME.

Roman value.		*Systematic name.*		*Approximate English value.*
10 Bajocchi	=	1 Paolo	=	5d.
10 Paoli or 100 Bajocchi	=	1 Scudo or Roman crown	=	4s. 2d.

* The following gold coins are now almost obsolete and are very rarely met with in circulation. The Gold *Doppia* and *Half-Doppia* of Savoy, the former equal to 28 Lire 45 Centimes, and worth about £1 2s. 10½d. sterling, and the latter equal to 14 Lire 22½ Centimes, and worth about 11s. 5½d. sterling. The *Quadruple Doppia* of Genoa, equal to 79 Lire, and worth about £3 3s. 4d. sterling; and pieces of ½, ¼, and ⅛ of the Quadruple Doppia.

GOLD COINS.

The gold coins are the 10 *Scudi Piece*, the *Pistole* or *Gold Doppia*, the *Sequin* (22 Paoli), the *Double Sequin*, and the *Half-Sequin* (11 Paoli).

SILVER COINS.

The silver coins are the *Scudo*, the *Half-Scudo*, and the pieces of ½, 1, 2, and 3 *Paoli*.

BILLON COINS.

In base silver there are pieces of 2, 4, 7½, and 15 Bajocchi. The two last being called *Single* and *Double Carlini*.

COPPER COINS.

The copper coins are the *Bajoccho*, the *Half-Bajoccho*, and the *Quarter-Bajoccho*.

BANK NOTES.

Bank notes (*Cédole*) for 5, 10, 20, 25, and 100 Scudi are used in payments above 5 Scudi.

THE TWO SICILIES.

(NAPLES.)

The money is now the same as that of Italy, but before the Two Sicilies became a portion of the Kingdom of Italy, the following were the denominations of coins in use:—

Neapolitan value.		*Systematic name.*		*Approximate English value.*
100 Grani	=	1 Ducat	=	3s 5½d.

Accounts were kept in Ducats and Grani only, but the Ducat was divided into 10 Carlini, each Carlini into 10 Grani, and each Grano into 10 Calli.

Payments were usually made in Neapolitan dollars, each worth 12 Carlini or 120 Grani.

There were no gold coins in circulation when the Kingdom was merged in that of Italy, but the gold coins that had been issued under the law of 20th April, 1818, were pieces of 30, 15, and 3 Ducats respectively.

The silver coins were the *Dollar*, equal to 12 Carlini or 120 Grani; the *Half-Dollar*, equal to 6 Carlini or 60 Grani; the ½, 1, 2, 3, and 4 *Carlini Pieces*.

The copper coins were pieces of 5, 4, 3, 2½, 2, 1½, 1, and ½ *Grani* respectively. The *Half-Grano Piece* was called a *Tornese*. The Grano had formerly been divided into 12 Calli, and among the poorer classes three Calli pieces were in circulation when the Kingdom became a province of Italy, but these assed only for 2½ Calli.

TUSCANY.

Tuscany now forms part of the Kingdom of Italy, and the money is the same as that of Italy, but formerly the denominations of the coins used were as follows:—

100 Cents = 1 Florin.

By the law of 10th July 1826, the money of account was ordered to be from 1st January 1827, Florins and Cents, but owing to the apathy of the people and the Government, the law was never enforced, and accounts continued to be kept, even in the Government offices, in *Lire*, *Soldi*, and *Denari*.

				Approximate English value.
12 Denari	=	1 Soldo	=	$\frac{2}{3}$d.
20 Soldi	=	1 Lire	=	7$\frac{1}{2}$d.

The *Lira* was equal to about 8d. sterling. The *Denaro* was an imaginary coin, and the lowest coin in circulation was the *Quattrino*, equal to 4 Denari, and worth about $\frac{3}{10}$d. sterling.

TURKEY.

Turkish value.		*Systematic name.*		*Approximate English value.*
40 Paras	=	1 Piastre	=	2$\frac{4}{5}$d.
* 100 Piastres	=	1 Medjidie,* or Lira Turca	=	18s.

The Medjidie, or Lira Turca, and the Piastre are the only integral denominations of money now used in keeping accounts, Paras being written as fractions of the Piastre.

In retail transactions of the shop and the market, the Piastre is divided into 40 Paras, and each Para into 3 Aspres. The Para is worth about $\frac{1}{10}$d., and the Aspre $\frac{1}{30}$d. sterling.

GOLD COINS.

The gold coins are the *Medjidie*, or Lira Turca, the *Yarim*, or *Half-Medjidie*, and the *Tzeirek*, or *Quarter-Medjidie*.

The gold coins contain 11 parts pure in 12.

SILVER COINS.

The silver coins are the *Guimuh*, or *Real-Medjidie*, of 20 Piastres; the silver *Yarim* or *Half Real-Medjidie* of 10 Piastres; the *Tzeirek* or *Quarter Real-Medjidie* of 5 Piastres;

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* In accounts,—
Pr. denotes Piastre, and
$\overline{\text{£}}$ denotes Medjidie or Lira Turca.

the *Tkilik* or 2 *Piastre Piece*; the *Piastre Piece*, worth about $2\frac{4}{5}$d., and the *Half-Piastre Piece*.

The silver coins contain 37 parts of pure silver to 3 parts of alloy.

COPPER COINS.

The copper coins are the *Piastre Piece*,* the *Half-Piastre Piece*, the *Quarter Piastre Piece*, the 5 *Para Piece*, and the *Para*.

CANDIA (or Crete).

The money of Candia is the same as that of Turkey, and the denominations used in reckoning and in accounts are the same. (See Turkey.)

GREECE.

Greek value.		*Systematic name.*		*Approximate English value.*
100 Lepta	=	1 Drachma	=	8½d.

GOLD COINS.

The gold coins are composed of 9 parts of pure gold and 1 part of copper. They are the 20 and 40 *Drachma Pieces*.

SILVER COINS.

The silver coins are the *Drachma*, the 5 *Drachma Piece*, the *Half-Drachma Piece*, and the *Quarter Drachma Piece*.

The gold and silver coins of Greece are very scarce, and the copper coins alone are abundant. Foreign gold and silver coins pass current at a rate fixed by a Royal Ordinance, dated 8th (20th) February, 1833.

COPPER COINS.

The copper coins are pure copper, and are pieces of 1, 2, 5, and 10 Lepta.

Not more than $\frac{1}{50}$ (or 2 per cent.) of the amount of any debt or account can be paid in copper coins.

The Drachma, estimating its value in gold, is worth 8½d. sterling. Its value, estimated in silver, is 8⅝d. sterling.

At 8½d. sterling for a Drachma, £1 sterling is equal to 28 Drachmai 23½ lepta; 5s. is equal to 7 Drachmai 6 lepta; 1s. is equal to 1 Drachmai 41 lepta; 1d. is equal to $11\frac{13}{17}$ Lepta.

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* The Piastre Piece is not generally current. It is not received by the government at all, but is accepted by men of business at a discount of from 20 to 25 per cent.

THE IONIAN ISLANDS.

(CORFU, SANTA MAURA, CEPHALONIA ZANTE, CERIGO, ITHACA, AND PAXO.)

As the Ionian Islands now belong to Greece, the Greek monetary system, no doubt, will soon be introduced in them; but some time must elapse before the old system (of the period of British protection) disappears. While these islands were under British protection (1829—1864) accounts were kept by some persons in *Dollars*, of 100 *Cents*; by others in *Pounds*, of 20 *Shillings*, of 12 *Pence* Ionian currency, and by others in *Piastres*, of 40 *Paras*.

Ionian value.		*Systematic name.*		*Approximate English value.*
5 Obolici	=	1 Oboliccio	=	¼d.
100 Oboli	=	1 Dollar	=	4s. 2d.
12 Pence	=	1 Shilling (currency)	=	1s. 0$\frac{1}{2}$d.
20 Shillings	=	1 Pound (,,)	=	£1 0s. 9$\frac{1}{2}$d.
40 Paras	=	1 Piastre	=	2$\frac{1}{20}$d.

CHINA.

The denominations of money used by the Chinese in keeping accounts are *Lëang*, *Tsien*, *Fun*, and *Le*, called by foreigners *Taels*, *Mace*, *Candareens*, and *Cash*. Reckonings are never made above Taels, and the lower denominations are generally expressed as decimals of the Tael.

Chinese value.		*Systematic name.*		*Approximate English value.*
10 Cash	=	1 Candareen (Fun)	=	$\frac{7}{10}$d.
10 Candareens	=	1 Mace (Tsien)	=	7d.
10 Mace	=	1 Tael (Lëang)	=	5s. 10d.

In China there are no national gold or silver coins. For large payments, bullion of known purity passes current by weight.

The *Tael* is a definite weight, and its subdivisions, the *Mace* and *Candareen* are likewise weights, or rather decimal parts of the Tael; but they are also denominations of money. The Tael is equal to 579·84 grains or 1·208 ounce troy, and its value at that rate is about 6s. 6$\frac{3}{4}$d. sterling. Foreign merchants in China keep their accounts in dollars of 100 Cents, and estimate the value of the Tael by its rate of exchange for dollars.

In China the fineness of gold and silver is expressed by dividing their weight into 100 equal parts called *Touch*. The number of these parts denotes the proportion there is of pure metal in 100 parts by weight.

The alloy used is called Pakfong, and is a mixture of zinc, nickel and copper.

Silver ingots of from 5 Mace to 10 Taels are used as money, but Gold ingots, called shoes, are regarded as articles of commerce.

Ten Taels of pure silver are reckoned equal to 1 Tael of pure gold.

Wän-Yin is the Chinese term for fine silver, but the term *Se-Sze* (fine silver), or *Sysee* is also used. Sysee silver is never altogether pure. For the purposes of trade in the different provinces of the empire, ingots are moulded of different sizes and touches. The ingots forwarded to the Imperial Treasury at Pekin in payment of taxes are of a touch of from 97 to 99, while the *Sysee* silver of commerce is generally of the fineness of 96.

When Chinese liabilities are liquidated in *Sysee* silver, 710 Taels are estimated as 1000 Dollars; thus the silver paid to the British authorities at Canton under the treaty of Nankin, in discharge of the Chinese indemnity, was received at that rate. This silver was found on essay to be of between 97 and 98 touch (*i.e.* 13 dwts. better than British Standard), and each lb. troy contained 13½ grs. of pure gold.

Reckoning 717 Taels as 1000 Dollars, and the Dollar as 4s. 2d. sterling, we have about 5s. 10d. as the approximate Dollar value of the Tael of Silver.

The Le, or Cash,* is the only coin issued by the Chinese Government. It is a circular piece of mixed metal, about $\frac{8}{10}$ths of an inch in diameter. It has a square hole in the middle by which the pieces are strung in bundles of 100.

The average intrinsic value of the legal Cash, at present in circulation, is about 5s. 1½d. sterling for 1000 Cash. But the proportion of forged Cash in any single payment is usually very considerable, sometimes exceeding one-third, and the average rate at which in commercial transactions Cash are converted into Dollars is 970 Cash for a Dollar, or 4s. 3½d. for 1000 Cash.

BANK NOTES.

The Bank Notes in circulation vary from 300 Cash to 1,000 Taels.

* It is called *Sapeque* by the French.

HONG-KONG.

Hong-Kong value.		*Intrinsic value.*		*Approximate English value.*
		1 Cent	=	½d.
100 Cents	=	1 Dollar	=	4s. 2d.*

There are no gold coins.

SILVER COINS.

The silver coins are the *Mexican Dollar*; other *Silver Dollars* of equivalent value; and the *10 Cent Piece*. The silver coins are all of the fineness: they contain 903 parts by weight of pure gold to 97 parts of alloy.

COPPER COINS.

The copper coins are the *Cent* and the *Mil*, or British Cash, representing the one thousandth part of a Dollar.

There are still in circulation considerable quantities of British silver and copper coins. These are exchanged by the Government for the new currency at a par of 4s. 2d. to the Dollar.

BRITISH INDIA.

In 1835 the Government established a uniform system for all the presidencies: and accounts are almost now always kept in *Rupees, Annas*, and *Pice*, as follows:—

Indian value.		*Intrinsic value.*		*Approximate English value.*
12 Pice	=	1 Anna	=	1½d.
16 Annas	=	1 Rupee	=	2s. 0d.†

GOLD COINS.

The gold coins are the *Mohur*, equal to 15 Rupees sterling; the *Double-Mohur*; the *Five Rupee Piece*, equal to *one-third* of a *Mohur*; and the *Ten Rupee Piece*, equal to *two-thirds* of a *Mohur*.

The gold coins of India are all of the standard of $\frac{11}{12}$ths fine, that is, they contain 11 parts (out of 12) of pure gold to 1 part of alloy.

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* The rate of 4s. 2d. above assigned to the Dollar is the Government *par*, or the rate at which the Dollar is issued in payment to the Navy, the Army, and the civil servants of the Crown: but according to the calculation of Sir H. Robinson, Governor of Hong-Kong, the Dollar is worth 4s. 7½d., and its true *par* in that colony is about 4s. 4d. sterling.

† The intrinsic value of the Rupee is nearly 1s. 11½d. sterling.

SILVER COINS.

The silver coins are the *Rupee*, the *Half-Rupee*, the *Quarter-Rupee*, and the *One-Eighth-Rupee*, or *Double Anna*. Single Annas, each worth about 1$\frac{1}{2}$d. sterling, were minted in 1835, and for some time afterwards, but they have not been issued of late years. The *Double Rupee* was authorized, but has never been put into circulation.

COPPER COINS.

The copper coins are the *Half-Anna*; the *Quarter-Anna*; and the *Pie*. In Bengal the *Quarter Anna* is called a Paisa.

BAZAAR MONEY.

Cowries, or small white glossy shells found on the shores of the Moldive and Laccadive islands, are used in the Bazaar for the payment of Coolies, and for small transactions among the natives.

A *Lac* of Rupees is 100,000 Rupees, and, reckoning the Rupee at 2s., is worth £10,000 sterling.* A *Crore* of Rupees is 100 Lacs, or 10 millions of Rupees, and is worth 100 millions sterling.

In BOMBAY accounts are sometimes kept in *Rupees*, *Quarters*, and *Raes*. Thus :—

100 Raes	=	1 Quarter	=	6d. sterling.
4 Quarters	=	1 Rupee	=	2s. 0d. ,,

In MADRAS accounts were formerly (and in some places are now) kept in *Pagodas*, *Fanams*, and *Cash*, as follows :—

		1 Cash	=	$\frac{1}{12}$d. English.
80 Cash	=	1 Fanam	=	4s. 0d. ,,
45 Fanam	=	1 Star Pagoda	=	£9 0s. 0d. ,,

In 1848 a distinct copper currency was introduced in the settlements of Penang, Singapore, and Malacca, to meet the want of a legal coin to represent, and to pass in Exchange for, fractions of the Spanish Dollar. This currency consists of the *Cent*; the *Half-Cent*; and the *Quarter Cent*.

CEYLON.

Accounts are kept in *Pounds*, *Shillings*, and *Pence* sterling. (See Great Britain and Ireland.)

The currency of Ceylon consists of Government Paper, convertable into the legal coins in circulation. These are British

* Or £9791 18s. 4d., reckoning the Rupee at 1s. 11$\frac{1}{2}$d. sterling.

silver and copper coins; *Rupees* of India; and some silver *Rixdollars*, current at 1s. 6d. each, also *Stivers* and *Fanams*.

12 Fanams = 1 Rixdollar

Previous to the year 1825 the Public Accounts were kept in Rixdollars, *Fanams*, and *Pice* or Stivers.

3 Chalies	=	1 Pie
4 Pice	=	1 Fanam
12 Fanams	=	1 Rixdollar

The currency consisted of silver Rixdollars coined at the British mint for the use of the colony; of copper Fanams and Pice, and an inconvertible Paper Rixdollar, issued by the Colonial Government.

BURMAH.

A Tical or Kyat's weight of silver is the chief unit in accounts.

Burmese value.	*Systematic name.*	*Approximate English value.*
4 Great or 8 Small Rwehs (rees)	= 1 Bais (Tubes, Toques)	= 1½d.
2 Bais	= 1 Mu's	= 3d.
2 Mu's	= 1 Math	= 6d.
4 Maths	= 1 Tical (Kyat)	= 2s. 0d.

The Tical, or Kyat, is a weight equal to 351 grains troy.

There are no coins, and large payments are made by means of gold and silver bullion by weight.

In small payments pieces of lead are also used.

SIAM.

Siamese value.	*Systematic name.*	*Approximate English value.*
200 to 450 (Cowries or Bier)	= 1 P'hainung	= $\frac{5}{16}$d.
4 P'hai-nungs	= 1 Fuang	= 3¾.
2 Fuangs	= 1 Salung or Miam	= 7½d.
4 Salungs or Miam	= 1 Tical or Bat	= 2s. 6d.
4 Ticals	= 1 Tamlung	= 10s. 0d.
20 Tamlungs	= 1 Catty or Chang	= £10 0s. 0d.
100 Changs or Catties	= 1 Pecul	= £1000 0s. 0d.

SILVER COIN.

The silver coin is the *Tical*. There are no gold coins.

The pewter coins are the *Half* and the *Quarter P'hai-nung*.

ANAM (or Cochin China.)

Accounts are commonly kept in *Quan*, *Mas*, and *Sapeks*, as follows:—

Anamese value.		*Systematic name.*		*Approximate English value.*
	1	Sapeck, or Dong, or Cash	=	$\frac{1}{16}$d.
60 Sapeks	= 1	Mas, or Mottien, or heap	=	3$\frac{3}{4}$d.
10 Mas	= 1	Quan, or String	=	2s. 9$\frac{1}{2}$d.

These values are calculated at the rate of 1$\frac{1}{2}$ Quan for the Spanish Dollar, worth 4s. 2d. sterling.

PERSIA.

Persian value.		*Systematic name.*		*Approximate English value.*
50 Dinars	=	1 Shahi	=	$\frac{3}{8}$d.
1000 Dinars or 20 Shahis	=	1 Keran	=	11$\frac{1}{4}$d.
10 Kerans	=	1 Toman	=	9s. 3$\frac{1}{2}$d.

GOLD COINS.

The gold coins are the *Toman*, the 5 *Keran Piece*, and the 2 *Keran Piece*.

SILVER COINS.

The silver coins are the *Keran*, the *Half-Keran*, the *Quarter-Keran*.

COPPER COINS.

The copper coins are the *Shahi*, the *Pool*, equal 33$\frac{1}{3}$ *Dinars*, the *Half-Pool*.

ARABIA.

Arabian value.		*Systematic name.*		*Approximate English value.*
80 Caveers	= 1	Piastre or Mocha Dollar	=	*3s. 5d.

JAPAN.

Japanese value.		*Systematic name.*		*Approximate English value.*
10 Mon	=	1 Candareen	=	$\frac{7}{10}$d.
10 Candareen	=	1 Mace	=	7d.
10 Mace	=	1 Rice or Tael	=	5s. 10d.

Reckonings are also sometimes kept as follows:—

1000 Zeni	=	1 Rice or Tael	=	5s. 10d.

* This value is reckoned from the exchange of Spanish Dollars for Piastres, at the rate of 100 Spanish Dollars for 121$\frac{1}{2}$ Piastres.

The Tael's weight of silver as a money of account must not be confounded with the now obsolete coin Tael or Riu, referred to below under "Silver Coins."

IRON COINS.

The *small Shi-mon-zheni* and the large *Shi-mon-zheni;* about 6,400 of the former, or 1,600 of the latter being considered equal to a Riu or Tael-weight of silver.

COPPER COINS.

The *Copper Shi-mon-zheni*, of the same value as the large *iron Shi-mon-zheni* (*i.e.* 1600 to a Tael), and the *Tenpo*, more properly called *Toohiaku*, or *Hiaku-mon-zheni*, equal to 25 copper or 100 small iron *Shi-mon-zheni*.

SILVER COINS.

The *Is-shiu*, or *Quarter-boo*, equal to 4 Töohiaku, the *Ni-Shiu*, or *Half-boo*, equal to 8 Töohiaku, and the *Itsi-boo*, or *Whole-boo*, equal to 16 Töohiaku, or 400 Mon or Zheni; these are respectively equivalent to $\frac{1}{16}$, $\frac{1}{8}$, and $\frac{1}{4}$ Tael. Formerly there was the *Silver Riu* or *Tael*, or 4 *Boo Piece*, but this is no longer in circulation.

In mixed metal, consisting of gold and silver, there are the *Itsi-boo-kin*, about $\frac{1}{4}$ the size of the silver Itsi-boo; and the *Ni-boo-kin*, equal to 800 Mon or $\frac{1}{2}$ a Tael of silver.

GOLD COINS.

The *Koban*, weighing 5 Riu, or Taels, worth about £1 9s. 2d. sterling. The *Half-Koban*, worth about 14s. 7d. sterling. The *Oban*, worth 30 Taels of silver. There are also the *Itagone*, or money slip, and the *Ko-dama* (or little pearls), of various weights stamped in proof of purity.

PENANG.

Penang value.		*Systematic name.*		*English value.*
100 Cents	=	1 Dollar	=	4s. 2d.

Sometimes accounts are kept in Dollars divided into 20 Copangs, each of 5 Pice. The current coins are Dollars of Spain, Mexico, and the South-American Republics, and British Indian Rupees.

The copper coins are the 1 and 2 cent pieces.

SINGAPORE.

Singapore value.		*Systematic name.*		*Approximate English value.*
100 Cent	=	1 Dollar	=	4s. 2d.
16 Annas	=	1 Rupee	=	2s. 0d.

SILVER COINS.

The silver coins are the *Dollar*, the *Rupee*, and the *Half Rupee*. A Spanish Dollar is valued at 12 Rupees 3 Annas.

There are no gold coins.

COPPER COINS.

The copper coins are the *Cent*, the *Half-Cent*, the *Quarter-Cent;* Dutch and other *Doits;* and Pice of India.

JAVA.

The money of account of Java is the same as that of the Netherlands.

Java value.		*Systematic name.*		*Approximate English value.*
100 Centen	=	1 Guilder or Florin	=	1s. 8d.

The exchange value of Java money is less than that above given, being at the rate of 7 *Netherland Guilders* for 8 Java Guilders. So that at the rate the value of the Guilder and Cent are respectively 1s. 5½d. and $\frac{7}{10}$d. sterling.

SILVER COINS.

The silver coins are the *Florin* or *Guilder*, the *Cent*, the *Half-Guilder*, the *Quarter-Guilder*, and the *Dime* equal to 10 cents.

COPPER COINS.

The only copper is the *Cent;* the old *Diot* is no longer in circulation.

PHILIPPINE ISLANDS.

Philippine value		*Systematic name.*		*Approximate English value.*
100 Cents	=	1 Real	=	2½d.
20 Reals	=	1 Peso or Hard Dollar	=	4s. 2d.

In Mindanao the universal legal coin is the Chinese Kansang, a large Nankin piece: 25 Kansang = 1 Gantang = about 10 Spanish hard or silver dollars = £2 1s. 8d. sterling.

EGYPT.

Egyptian value.		*Systematic name.*		*Approximate English value.*
		1 Fuddah or Para	=	$\frac{1}{10}$d.
40 Paras	=	1 Piastre or Ckirsh	=	2¼d.

Egyptian money is considered to be of the same value as that of Turkey. The smallest Egyptian coin is the Fuddah. There are also pieces of 5, 10, and 20 Fuddah. The Dollar of Spain, Mexico, and South America, is also a constant medium of payment.

GOLD COINS.

The gold coins are the *Saadeeyeh*, equal to 4 Piastres, and the *Kheyreeyeh*, equal to 9 Piastres.

TRIPOLI.

poli value.		*Systematic name.*		*Approximate English value.*
) Paras	=	1 Piastre	=	2½d.
) Piastres	=	1 Mahhub	=	4s. 2d.

TUNIS.

Tunis value.		*Systematic name.*		*Approximate English value.*
3 Fels	=	1 Karub	=	$\frac{3}{8}$d.
16 Karubs	=	1 Piastre	=	$5\frac{3}{8}$d.

SILVER COINS.

The silver coins are the 5 *Piastre Piece*, the *Piastre*, the *Quarter-Piastre*, the 2 *Karub Piece*, and the *Karub*. The three last coins are of a very low standard, and are rather billon than silver.

COPPER COINS.

The copper coins are the *Karub* and the *Fel*.

ALGERIA.

Since the conquest of the country by France, in 1830, the denominations of money used in reckoning and keeping accounts have been *Francs* and *Centimes* (100 Centimes = 1 Franc) as in France (see France).

The currency of France has not yet altogether superseded the old system, and the native coins are still in circulation.

Formerly accounts were kept in *Budschus*, or *Buschus*, and *Musuhns*, or *Mozounahs*. The *Buscku* is the *Pataca*, or Algerine Piastre, and the *Musuhn* is sometimes called a *Tomin*.

Algerine value.		*Systematic name.*		*French value.*		*English value.*
24 Musuhn	=	1 Budschu	=	1 Franc 86 cts.	=	1s. $5\frac{1}{4}$d.

MOROCCO.

Morocco value.		*Systematic name.*		*Approximate English value.*
		1 Flue	=	$\frac{37}{960}$d.
24 Flues	=	1 Blankeel	=	$\frac{37}{40}$d.
4 Blankeels	=	1 Ounce	=	$3\frac{7}{10}$d.
10 Ounces	=	1 Mitkul	=	3s. 1d.

54 Blankeels are considered equal to 1 Spanish Dollar.

ABYSSINIA.

Abyssinian value.		*Systematic name.*		*Approximate English value.*
3 Borjooks	=	1 Kibear	=	$\frac{5}{12}$d.
10 Kibears	=	1 Divanis	=	$\frac{25}{4}$d.
4 Divanis	=	1 Harf	=	$2\frac{6}{25}$d.
23 Harfs	=	1 Pataka or Dollar	=	4s. 2d.
$2\frac{1}{4}$ Patakas	=	1 Sequin	=	9s. $4\frac{1}{2}$d.

This country has no coinage of its own, and large payments are usually made in gold ingots, by weight.

WEST COAST OF AFRICA,

VIZ.,

SIERRA-LEONE, THE GAMBIA, CAPE COAST CASTLE, THE GOLD COAST.

Accounts are kept in *Pounds*, *Shillings*, and *Pence* sterling as in Great Britain.

EAST COAST OF AFRICA.

VIZ.,

MOZAMBIQUE.

(SAME AS PORTUGAL).

MAURITIUS.

The Government accounts are kept in *Pounds*, *Shillings*, and *Pence* sterling, as in Great Britain; but merchants and bankers reckon and keep their accounts either in *Dollars* and *Centimes*, or in *Dollars*, *Livres*, and *Sous*, as follows:—

Mauritius value.		*Systematic name.*		*Approximate English value.*
		1 Cent	=	$\frac{12}{50}$d.
100 Cents	=	1 Dollar, *current*	=	3s. 10d.
		OR,		
		1 Sou	=	$\frac{12}{100}$d.
20 Sous	=	1 Livre	=	$4\frac{1}{5}$d.
10 Livres	=	1 Dollar	=	3s. 10d.

CAPE OF GOOD HOPE.

(SAME AS GREAT BRITAIN).

But accounts are often still kept in the old denominations, as follows:—

6 Stivers	=	1 Schilling	=	$2\frac{1}{4}$d. sterling.
8 Schillings	=	1 Rixdollar	=	1s. 6d. ,,

ST. HELENA.

(SAME AS GREAT BRITAIN).

CANADA.

In British North America accounts are kept sometimes in *Dollars* and *Cents*, and sometimes in *Pounds*, *Shillings*, and *Pence* currency, the word currency being used to distinguish those denominations from Pounds, Shillings, and Pence sterling of Great Britain.

Canadian value.		*Systematic name.*		*Approximate British sterling value.*
10 Mils	=	1 Cent	=	½d.
100 Cents	=	1 Dollar	=	4s. 2d.
		OR,		
		1 Penny	=	½d.
12 Pence	=	1 Shilling	=	10d.
20 Shillings	=	1 Pound currency	=	16s. 8d.*

NOVA SCOTIA.

Nova Scotia value.		*Systematic name.*		*Approximate British sterling value.*
		1 Cent	=	¼d.
100 Cents	=	1 Dollar	=	4s. 2d.
		OR,		
		1 Penny	=	½d.
12 Pence	=	1 Shilling	=	9⅗d.
20 Shillings	=	1 Pound	=	16s. 0d.

NEW BRUNSWICK.

(SAME AS CANADA).

THE BERMUDAS.

Accounts are kept in *Pounds*, *Shillings*, and *Pence*, sterling, as in Great Britain.

Doubloons of Spain, Mexico, and South America, of not less weight than 17 dwts. 8 grs. troy, are current at the rate of 64s. sterling, and Dollars of the same countries, at 4s. 2d. sterling.

All taxes and revenues are received either in British sterling money, or its equivalent in Foreign coins.

NEWFOUNDLAND.

(SAME AS CANADA).

* Government accounts are kept in Pounds, Shillings, and Pence sterling. It is most probable, however, that Dollars and Cents will form the only legal money of account.

UNITED STATES OF NORTH AMERICA.

American value.		*Systematic name.*		*Approximate English value.*
		1 Cent	=	½d. *
100 Cents	=	1 Dollar	=	4s. 2d. *

The unit of account is the *Dollar* ($); although Dollars and *Cents* are practically the only moneys of account, there are the denominations *Dimes* or *tenths*, and *Mils* or *thousandths* of the Dollar. The Dime has its legal representative in a silver coin worth about 4·9d. sterling. There is no coin to represent the Mil.

The Dollar is worth 4s. 1·316d., or nearly 4s. 2d. sterling, and the Cent about ·493d., or nearly a Half-penny sterling.

GOLD COINS.

The gold coins are the *Double Eagle* of 20 Dollars; the *Eagle* (not in very general circulation) of 10 Dollars; the *Half-Eagle; Quarter-Eagle; 3 Dollar Piece*, and 1 *Dollar Piece*. The gold coins are all of the fineness of $\frac{9}{10}$ths.

SILVER COINS.

The silver coins are the silver Dollar; the Half-Dollar; the Quarter-Dollar; the Dime; the Half-Dime; and the Three-Cent Piece.

COPPER COINS.

The copper coins are the Cent and the Half-Cent Pieces.

MEXICO.

Mexican value.		*Systematic name.*		*Approximate English value.*
100 Cents	=	1 Dollar	=	4s. 2d.

* These are the values of the Gold and Silver money. The paper currency (Greenbacks) is at a discount. When a paper currency and specie have different values, there are two ways of comparing them. Taking specie as the standard of comparison, we say that the paper currency is at a discount, that is, it is less valuable; or taking the paper currency as the standard, we say that specie is at a premium, that is, it is more valuable. In the United States of North America, the difference between the value of the paper currency and gold and silver is quoted as a premium on the paper. During the civil war (1861—5), the value of the paper money had fallen very low; let us take as an instance the price of gold when it was quoted at 200. This quotation meant that 100 dollars in gold were worth 200 dollars in paper money, that is, gold was at a premium of 100 per cent., or conversely, that 100 dollars in paper money were worth only 50 dollars in gold; that is, the paper money was at a discount of 50 per cent. The price of gold at New York, on 7th March 1866, was quoted at 134, that is, the paper money was then at a discount of about 24⅝ per

GOLD COINS.

The gold coins are the *Doubloon* nominally equal to 16 (but really to about 15¼) silver Dollars; the *Half-Doubloon; Quarter-Doubloon*, and 2 *Dollar Piece.*

SILVER COINS.

The silver coins are the Dollar; Half-Dollar; the *Peseta de Columnas* (25 cents), or Quarter-Dollar (12½ cents); *Real* of Mexican plate; and the *Half-Real.*

COPPER COINS.

The copper coins are the *Quartillo* (3⅛ cents), and the *Ochavo* or *Claco* ($1\frac{9}{16}$ cents).

WEST INDIES. (British).

Accounts are kept sometimes in *Pounds*, *Shillings*, and *Pence* sterling, as in Great Britain, and sometimes in *Dollars* and *Cents* as follows:—

West Indian value.		*Systematic name.*		*Value in British sterling value.*
100 Cents	=	1 Dollar	=	4s. 2d.

GOLD COINS.

The gold coins are the *English Sovereign*, and *Half-Sovereign*, *Spanish*, *Mexican*, and *Columbian Doubloons*, *United States' Eagle*, *Half-Eagle*, *Quarter-Eagle*, *Two Dollar-piece*, *One Dollar*, and *Quarter-Dollar*, and the *Californian Twenty Dollar-piece.* The *Old Pistole* (value £1 6s. 8d.), is sometimes met with.

SILVER COINS.*

The silver coins are the *Crown*, *Half-Crown*, *Florin*, *Shilling*, *Sixpence*, *Fourpence*, *Threepence*, *Twopence*, and the *Quattie*, (1½d.) of Great Britain. The *Dollar*, *Half-Dollar*, and *Quarter-Dollar* of the *United States*, *Spain*, *Mexico*, and *South America.*

COPPER AND BRONZE COINS.

The copper coins are the *Penny*, *Half-Penny*, and *Farthing.* The copper and bronze coins of Great Britain are not in general circulation. In Jamaica, for instance, copper money is

* The following silver pieces of the old currency are sometimes met with:—the Macaroni nominally 1s. 8d., but worth only 1s.; the Tenpenny piece nominally 10d., but worth only 6d.; the Bitt nominally 7½d., but worth only 4½d.; the Fivepenny piece nominally 5d., but worth only 3d.; the Quattie nominally 2½d., but worth only 1½d. The Tenpenny piece, the Bitt, and the Quattie, were frequently cut pieces of the Macaroni; even now the country negroes count their money in Bitts. They also talk of the Macaroni or Mac.

issued and received in the Post Office, but it is altogether refused by the lower orders; it cannot therefore be considered as being in circulation. The lowest coin in general use is the Quattie. The want of a coin of smaller value, which the working people will accept, has long been felt in Jamaica. The necessaries of life are so cheap in Jamaica, that the Quattie pays for more than, in many instances, is wanted, and so the purchaser either loses the surplus, or barters it away for other articles. Thus money is wasted, the negro is led to undervalue the Quattie, and naturally looks for higher wages. A change is very much needed, the present coins are insufficient, and now that the British Government is about to change the Constitution of Jamaica, it might be an excellent time to remodel the currency. Florins and cents might be constituted the moneys of account for all the West India colonies, and the current coins might be Sovereigns, and Half-Sovereigns, in gold; and Florins, Shillings, Sixpences, and Threepences in silver; and pieces of 10, 5, 2, and 1 centimes in an alloy of Nickel, a metal which would be very likely to be accepted by the lower orders.

BANK NOTES.

The colonial Bank issues notes of £10, £5, and £1, which are exchangeable for gold or silver at their full nominal value. Formerly the local Government issued Bank Notes at 12s. each, but these have been long since re-called; afterwards the planters and Colonial Banks issued notes of £10, £5, and £1, but the Colonial Banks' Notes are now the only ones in circulation.

HAYTI (or Hispaniola, or St. Domingo.)

Accounts are kept in current *Dollars* (called *Gourdes*) and *Cents*.

Haytian value.	*Systematic name.*		*Approximate English value.*
	1 Cent	=	$\frac{1}{2}$d.
100 Cents	1 Gourde, or Dollar	=	3$\frac{1}{2}$d.

The native currency consists of Depreciated Paper Gourdes, and of 1 and 2 cent pieces in copper.

COLOMBIA (United States of).

VIZ.,

NEW GRANADA, VENEZUELA AND ECUADOR.

Colombian value.	*Systematic name.*		*Approximate English value.*
100 Centavos	= 1 Dollar	=	4s. 2d.

Colombia, having no special coinage of her own, uses the currencies of other countries, assigning thereto definite rates.

GUIANA. (British.)

Guiana value.		*Systematic name.*		*Value in British sterling money.*
100 Cents	=	1 Dollar	=	4s. 2d.

The current coins are those of Great Britain, Spain, United States of America, and the South American Republics.

BRAZIL.

(SAME AS PORTUGAL).

The currency consists of Notes for a Milreis (1$000) and upwards, and of copper coins of 10, 20, 40 Reis. The value of a paper Milreis varies from 2s. to 2s. 4d. sterling.

PERU.

Peruvian value.		*Systematic name.*		*Approximate English value.*
100 Centesimos	=	1 Dollar*	=	3s. 1d.

It was announced in 1864, that the Government of Peru had made arrangements for introducing a new standard national coinage, and that all Bolivian coin would be sent out of the country, or melted in Lima within two years from that time.

CHILI.

Chilian value.		*Systematic name.*		*Approximate English value.*
100 Centavos	=	1 Dollar or Peso current	=	3s. 9d.

GOLD COINS.

The gold coins are the *Condor* (10 dollars); the *Doblon* (5 dollars); and the *Escudo* (2 dollars). The gold coins are all $\frac{9}{10}$ths fine.

SILVER COINS.

The Dollar, Half-Dollar, and Pieces of 20, 10, and 5 Centavos. The silver coins are also $\frac{9}{10}$ths fine.

COPPER COINS.

The copper coins are the *Centavo* and the *Half-Centavo*.

* This value is taken from the quoted exchanges, and refers to the old currency of Bolivian Dollars.

BOLIVIA.

Accounts are kept in *Dollars* and *Centimes* as follows:—

Bolivian value.		*Systematic name.*		*Approximate English value.*
100 Centimes	=	1 Dollar	=	3s. 1d.

COINS.

The current coins are gold Doubloons and silver Dollars and their subdivisions. The Bolivian Silver Dollar, when of full weight and fineness, is worth 4s. 2d. sterling, but for many years the coins issued from the Potosi Mint (with the exception of the Dollar) have all been 25 per cent. below the standard. This circumstance has reduced the exchange value of the Bolivian currency to about 3s. 1d. sterling per Dollar.

ARGENTINE REPUBLIC, or LA PLATA.

BUENOS AYRES.*

The denominations of money used in keeping accounts are *Patacons* or *Dollars*, and *Centesimos*, as follows:—

Buenos Ayres value.		*Systematic name.*		*Approximate English value.*
100 Centesimos	=	1 Dollar or Patacon	=	2s. 1d.

In the year 1857, the Buenos Ayres Government made the gold Doubloon, at the rate of 17 to the Patacon, the chief monetary unit, and divided the Dollar into 100 parts. Previous to that time accounts were kept in *Dollars*, *Reals*, and *Quartos*.

The circulating medium of Buenos Ayres consists partly of gold *Doubloons*, but principally of an inconvertible paper currency of the Provincial Bank. The value of this latter is constantly fluctuating, from political and other causes.

GOLD COINS.

The gold coins in circulation are *Doubloons* of Mexico, Peru, and Chili, at the rate of 16 silver *Patacons* or Dollars each;

* The States of the Confederation were Buenos Ayres, Entre-Rios, Corrientes, Santa Fè, Cordova, Santiago, Tucuman, Salta, Catamarca, Rioja, San Juan, San Luis, and Mendoza. Civil disputes led to a dissolution of the Confederacy, and the country is now so many independent provinces, the leading one of which is Buenos Ayres. Buenos Ayres, from its maritime position, is the emporium for the produce of the whole of La Plata, and also Chili and Peru. The wealth and prosperity of Buenos Ayres have been rapidly increasing of late years, and no doubt, the currency will be placed on a sounder footing. The honorable arrangement made by the Buenos Ayres Government with British Bond holders has inspired commercial confidence, and British capital is finding its way into the province. Railways have been constructed, and a Bank with London directors has been opened at Buenos Ayres.

the *Double Eagle*, the *Eagle*, the *Half-Eagle*, the *Quarter-Eagle*, and the 3 *Dollar Piece* of the United States of North America, at par; the British *Sovereign*, at 4 Patacons 90 cents; the British *Half-Sovereign*, at 2 Patacons 45 cents; the *French Napoleon*, at 3 Patacons 90 cents, and the Chilian *Condor*, at 9 Patacons 20 cents.

SILVER COINS.

The following are the silver coins which are occasionally met with in the circulation, but their amount is very limited, and they can hardly be considered a part of the legal currency. The Spanish *Real*, and 2 *Real* and 4 *Real Pieces*, the 1, ½, and ¼ *Bolivian Dollar Pieces*, *Peruvian* and *Chilian Dollars*, and the *Patacon* or *Silver Dollar* of the Argentine Republic, but this latter has almost wholly disappeared from circulation. It was of the same weight and purity as the Spanish Hard Dollar.

COPPER COINS.

Copper coins which from their being each equal to ½th of a Paper Dollar were called Reals, and which are of the same value as the *Centesimo*, viz., ½d. sterling.

PAPER MONEY.

The paper money in circulation consists of Notes of 5, 10, 20, 50, 100, 500, and 1000 Dollars.

URUGUAY. (Montevideo.)

(SAME AS SPAIN).

PARAGUAY.

(SAME AS BOLIVIA).

FALKLAND ISLANDS.

(SAME AS GREAT BRITAIN).

NEW SOUTH WALES.

(SAME AS GREAT BRITAIN).

(VICTORIA, SOUTH AUSTRALIA, WEST AUSTRALIA, TASMANIA OR VAN DIEMEN'S LAND)

NEW ZEALAND.

(SAME AS FRANCE. See page 41).

NEW CALEDONIA, THE ROTUMAH ISLANDS, WALLIS ISLANDS, GAMBIER'S ISLAND, THE MARQUESAS, or, MANDANA ISLANDS.

THE SANDWICH ISLANDS.

The British denominations of *Pounds*, *Shillings*, and *Pence* sterling (see p. 2) have been declared the official moneys of account for the whole kingdom. But merchants almost always keep their accounts in Dollars and Cents, or Dollars and Reals, as follows:—

Haiwaian value.	*Systematic name.*	*Approximate English value.*
100 Cents, or 8 Reals	= 1 Dollar	= 4s. 2d.

The currency consists of coins of other countries to which are assigned rates fixed by custom, and by the rates at which the Government receives them in payment of duties and taxes.

WEIGHTS AND MEASURES.

SECTION II.

THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND.

I.—IMPERIAL MEASURES OF LENGTH.

English value.	*Systematic name.*	*Metric Equivalent.*
		Centimetres.
12 Inches	= 1 Foot	= 30·4794
3 Feet	= 1 Yard	= 91·4383
5½ Yards	= 1 Pole, Rod, or Perch	= Metres. 5·02911
4 Poles, or 100 Links	= 1 Chain	= 20·11643
40 Perches, or 10 Chains	= 1 Furlong	= 201·16436
8 Furlongs, or 1760 Yards	= 1 Mile	= Kilometres. 1·610931492
3 Miles	= 1 League	= 4·832794476

II.—IMPERIAL MEASURES OF SURFACE.

English value.	*Systematic name.*	*Metric Equivalent.*
		Ares.
144 Sq. Inches	= 1 Sq. Foot	= ·000929
		Square Metre.
9 Sq. Feet	= 1 Sq. Yard	= ·008361 or ·836097
30¼ Sq. Yds. or 272¼ Sq. Feet	= 1 Sq. Rod, Pole or Perch	= ·252919 or 25·291939
40 Poles	= 1 Rood	= 10·116775
4 Roods (4840 Sq. Yds. / 10 Sq. Chains or / 100,000 Sq. Links)	= 1 Acre	= Hectares. 40·467102 or ·404671
100 Acres make 1 Hide of Land		= 4046·7102 or 40·467102

III.—IMPERIAL MEASURES OF CUBIC CAPACITY.

English value.	*Systematic name.*	*Metric Equivalent.*
		Cubic Metres.
1728 Cubic Inches	= 1 Cubic Foot	= ·028315
27 Cubic Feet	= 1 Cubic Yard	= ·764513

IV.—IMPERIAL MEASURES OF CAPACITY FOR LIQUIDS.

English value.	*Systematic name.*	*Metric Equivalent.*
		Millitres. Litres.
8·665 Cubic Inches	= 1 Gill	= 141·984 or ·14198
4 Gills	= 1 Pint	= 567·936 „ ·56936
2 Pints	= 1 Quart	= 1·13587
4 Quarts	= 1 Gallon	= 4·543487

V.—IMPERIAL MEASURES OF CAPACITY FOR DRY GOODS.

English value.	*Systematic name.*	*Metric equivalent.*
		Litres.
2 Pints	= 1 Quart	= 1·1358
4 Quarts	= 1 Gallon	= 4·543487
2 Gallons	= 1 Peck	= 9·086974
4 Pecks (8 Gallons)	= 1 Bushel	= 36·347896
		Hectolitres.
8 Bushels	= 1 Quarter	= 2·90783168

VI.—MEDICAL SUBDIVISIONS OF THE IMPERIAL PINT.

English value.	*Systematic name.*	*Metric equivalent.*
		Millilitres.
60 Minims	=1 Fluid Drachm (f. ʒ.)	= 3·5495765625
8 Fluid Drachms	=1 Fluid Ounce (f. ℥.)	= 28·39661251
		Litres.
20 Fluid Ounces	=1 Imperial Pint (0.)	= ·567936
8 Pints	=1 Gallon	= 4·543487

VII.—WEIGHTS.—(*a*) AVOIRDUPOIS WEIGHTS.

English value.	*Systematic name.*	*Metric equivalent.*
		Grammes.
27$\frac{11}{32}$ Troy Grains	=1 Dram (dr.)	= 1.7718476
16 Drams	=1 Ounce (oz.)	= 28·3495625
16 Ounces (or 7000 Troy Grains)	=1 Pound (lb.)	= 453·5925
		Kilogrammes.
14 Pounds	=1 Stone	= 6·350302
28 Pounds	=1 Quarter (qr.)	= 12·700604
4 Quarters (or 112 lbs.)	=1 Hundredweight (cwt)	= 50·802416
20 Hundredweight	=1 Ton	= 1016·04832

This weight is used in almost all commercial transactions.

(*b*) TROY WEIGHT.

English value.	*Systematic name.*	*Metric equivalent.*
		Grammes.
20 Grains	= 1 Pennyweight (dwt.)	= 1·555176
20 Pennyweights	= 1 Ounce or Carat (oz.)	= 31·10352
12 Ounces	= 1 Pound (lb.)	= 373·24224

This weight is used for gold, silver, and precious stones, and in philosophical experiments.

(*c*) JEWEL WEIGHT.

		Grammes.
240 Grains (gold or silver)	= 1 Carat	= 15·5176
24 Carats	= 1 Pound (lb)	= 373·24224

(*d*) DIAMOND AND PEARL WEIGHT.

		Milligrammes.
16 Parts	= 1 Grain	= 64·799
4 Grains	= 1 Carat	= 259·196
		Grammes.
151$\frac{1}{2}$ Carats, or 600 Grs.	= 1 Ounce Troy	= 31·10352

(*c*) NEW APOTHECARIES' WEIGHT. (Introduced in 1864).

				Grammes.
437½ Grains	=	1 Ounce (oz.)	=	28·34956
16 Ounces	=	1 Pound (lb.)	=	453·593

OLD APOTHECARIES' WEIGHT. (Superseded in 1864).

				Grammes.
20 Grains	=	1 Scruple (℈)	=	1·29598
3 Scruples	=	1 Drachm (ʒ)	=	3·88794
8 Drachms	=	1 Ounce (℥)	=	31·10352
12 Ounces	=	1 Pound (lb.)	=	373·24224

FRANCE.

MEASURES OF LENGTH.

French value	*Systematic Name.*	*Approximate English value.*		
				Inches.
1000th part of Metre	= 1 Millimetre =			·03037079
100th part of Metre	= 1 Centimetre =			·3937079
10th part of Metre	= 1 Decimetre =			3·937079
		Yd.	Ft.	
	1 Metre =	1	0	3·37079
10 Metres	= 1 Decametre =	10	2	9·7079
100 Metres	= 1 Hectometre =	109	1	1·079
1000 Metres	= 1 Kilometre =	1093	1	10·79
		Miles.		
10000 Metres	= 1 Myriametre =	6	370	0 . 11·0

The Metre is the fundamental unit of the measures of length as well as of all weights and measures. It is the ten millionth part of the distance from the Pole to the Equator.

The *League* of 4 Kilometres = 4000 Metres; the League of 25 to a degree = 4444 Metres; the Nautical League of 20 to a Degree = 5556 Metres; and the Nautical mile of 60 to a Degree = 1852 Metres.

MEASURES OF SURFACE.

French value.	*Systematic name.*	*Approximate English value.*
		Square Inches.
100 Sq. Millimetres	= 1 Sq. Centimetre	= ·1500591052192
100 Sq. Centimetres	= 1 Sq. Decimetre	= 15·500591052192
		Square Feet.
100 Sq. Decimetres	= 1 Centiare	= 10·7642993418
100 Sq. Metres	= 1 Are or Sq. Decametre	Poles. = 3·953828959
		Acres.
100 Sq. Decametres	= 1 Hectare	= 2·4711431
100 Sq. Hectares	= 1 Sq. Kilometre	= 247·11431
100 Sq. Kilometres	= 1 Sq. Myriametre	= 24711·431

CUBIC, OR SOLID MEASURES.

French value.	*Systematic name.*	*Approximate English value.*
		Cubic Feet.
$\frac{1}{10}$th of a Stere =	1 Decistere =	3·531714
10 Decisteres =	1 Stere =	35·31714
10 Steres =	1 Decastere =	353·1714

MEASURE OF CAPACITY.

French value.	*Systematic name.*	*Approximate English value.*
		Minims.
1000th of a Cubic Decimetre	= 1 Millilitre =	16·9034247744
		Fluid Drachms.
10 Millilitres	= 1 Centilitre =	2·8172374624
		Imperial Pints.
10 Centilitres	= 1 Decilitre =	·176077339525
10 Decilitres	= 1 Litre =	1·76077339525
		Imperial Gallons.
10 Litres	= 1 Decalitre =	2·2009667440625
		Imperial Bushels.
10 Decalitres	= 1 Hectolitre =	2·751208430078125
10 Hectolitres	= 1 Kilolitre =	27·51208430078

TABLE OF WEIGHTS.

French value.	*Systematic name.*	*Approximate English value.*
		Grains Troy.
1000th of a Gramme	= 1 Milligramme =	·015432349
10 Milligrammes	= 1 Centigramme =	·154323488
10 Centigrammes	= 1 Decigramme =	1·54323488
10 Centigrammes	= 1 Gramme =	15·4323488
10 Grammes	= 1 Decagramme =	154·323488
		Oz. Drams Av.
10 Decagrammes	= 1 Hectogramme =	3 8·4383
		lbs. oz. Drams.
10 Hectogrammes	= 1 Kilogramme =	2 3 4·3830
		lbs. Av.
10 Kilogrammes	= 1 Myriagramme =	22·0466
10 Myriagrammes	= 1 Quintal Metrique =	220·466
10 Quintals	= 1 Ton or Millier =	2204·66

RUSSIA.

MEASURES OF LENGTH.

Russian value.	*Systematic name.*	*Approximate English value.*
		Inches.
8 Vershoks	= 1 Stopa =	14
2 Stopas, or 16 Vershoks	= 1 Arschine* =	28
		Feet.
3 Arshines	= 1 Saschen =	7
		Furlongs.
500 Sachens	= 1 Verst =	5½

* Used in Cloth Measure.

MEASURES OF SURFACE.

Russian value.	*Systematic name.*	*Approximate English value.*
		Square Inches.
9 Sq. Archines	= 1 Square Sachine	= 784
		Square Yards.
2400 Sq. Sachines	= 1 Desatine	= 13067

The *Desatine* is equal to 2¦Acres 2 Roods 32 Poles, English.

MEASURES OF CAPACITY FOR LIQUIDS.

Russian value.	*Systematic name.*	*Approximate English value.*
		Gill.
	1 Tscharkey	= ·86 nearly.
		Imperial Gallons.
100 Tscharkeys	= 1 Vedro	= 2·7049
3 Vedros	= 1 Anker	= 8·1147
40 Vedros	= 1 Sarokowaja	= 108·196

MEASURES OF CAPACITY FOR DRY GOODS.

Russian value.	*Systematic name.*	*Approximate English value.*
		Impl. Quarts.
	1 Garnietz	= 5·7696
		Impl. Gallons.
2 Garnietz	= 1 Tschetwerka	= 1·4424
		Pecks.
4 Tschetwerkas	= 1 Tschetwerik	= 2.8852
		Bushels.
2 Tschetweriks	= 1 Pajak	= 1·4426
2 Pajaks	= 1 Osmin	= 2·8852
2 Osmins	= 1 Tschetwert	= 5·7704
		Impl. Quarters.
16 Tschetwerts	= 1 Last	= 11·5408

WEIGHTS.

Russian value.	*Systematic name.*	*Approximate English value.*
		Dwts. Grs. Troy.
96 Dolis	= 1 Zolotnick	= 2 $17\frac{4}{5}$
3 Zolotnicks	= 1 Lotti	= 8 $5\frac{1}{3}$
		Ounces Avr.
8 Zolotnicks	= 1 Lana	= $1\frac{1}{5}$
12 Lanas or 32 Lotti	= 1 Funt (Pound)	= $14\frac{1}{2}$
		Qr. lbs.
40 Funts	= 1 Pud (or Pood)	= 1 $8\frac{1}{10}$
		Cwt. qr. lbs.
10 Puds	= 1 Berkovitz	= 3 0 $25\frac{1}{25}$
3 Berkovitz	= 1 Packen	= 9 2 $19\frac{1}{7}$

AUSTRIA.

MEASURES OF LENGTH.

Austrian value.		*Systematic name.*		*Approximate English value.*		
				Lines.		Inches.
12 Punkte	=	1 Linie	=	1·0368	or	·0864
12 Linien	=	1 Zoll	=	12·4416	,,	1·0371
				Feet.		
12 Zoll	=	1 Fuss	=	1·0371	,,	12·445
2 Fuss	=	1 Elle	=	2·0742	,,	30·6756
						Yards.
6 Fuss	=	1 Klafter	=	6·2226	,,	2·7042
						Miles.
4000 Klafter	=	1 Meile (Post)	=			4¾

MEASURES OF SURFACE.

Austrian value.		*Systematic name.*		*Approximate English value.*	
				Sq. Feet.	Sq. Inches.
144 Square Zoll	=	1 Square Fuss	=	1·0756229	or 154⅞
				Sq. Yards.	
36 Square Fuss	=	1 Square Klafter	=	4·3025	
8¼ Square Klafter	=	1 Square Ruthe	=	35·52083	
192 Sq. Ruthen	=	1 Metze	=	2294⅛	
				Sq. Yds.	Statute Acre.
3 Metzen or 1600 Sq. Klafter	=	1 Yoch or Johart	=	6884	or 1·42231

MEASURES OF CAPACITY FOR DRY GOODS.

Austrian value.	*Systematic name.*	*Approximate English value.*
		Bushels.
8 Probmetzen	= 1 Becher	= ·0132
4 Becher	= 1 Futtermassel	= ·0529
2 Futtermassel	= 1 Muhlmassel	= ·1057
2 Muhlmassel	= 1 Achtel	= ·2115
2 Achtel	= 1 Viertel	= ·4230
4 Viertel	= 1 Metze	= 1·6918
30 Metzen	= 1 Muth	= 50·7536

MEASURES OF CAPACITY FOR LIQUIDS.

Austrian value.	*Systematic name.*	*Approximate English value.*
		Imperial Pint.
2 Pfiff	= 1 Seidel	= ·6232
		Imperial Pint.
2 Seidel	= 1 Kanne	= 1·2464
		Quart.
2 Kannen	= 1 Mass	= 1·2464
		Gallons.
10 Mass	= 1 Viertel	= 3·1143
4 Viertel	= 1 Eimer	= 12·4572
Eimer	= 1 Fuder	= 398·6304

WEIGHTS (COMMERCIAL).

4 Pfenning	= 1 Quentchen	=		Drachm.	2·4694
4 Quentchen	= 1 Loth	=			9·8776
2 Loth	= 1 Unze	=	Ounce. 1		3·7552
4 Unzen	= 1 Vierdinge	=	4		15·0208
2 Vierdinges	= 1 Mark	=	9		14·0416
2 Marks	= 1 Pfund	=		lbs. Avoir.	1·2347
100 Pfund	= 1 Centner	=			123·47

The Apothecaries' Pfund is $\frac{3}{4}$ths of the Commercial Pfund, that is, it is equal to 1½ Marks, or 24 Loth. It is divided into 12 Unzen, or 97 Drachmen, or 288 Scruples, or 5760 Gran.

GERMANY, (North).

PRUSSIA.

MEASURES OF LENGTH.

North German value.	*Systematic name.*	*Approximate English value.*	
		Litres.	Inches.
12 Linien	= 1 Zoll	= 12·356 or	1·029
12 Zoll	= 1 Fuss	= 1·02966 „	12·356
		Feet.	
2 Fuss	= 1 Elle	= 2·0596	
			Yards.
6 Ellen or 12 Fuss	= 1 Ruthe	= 12·3576 „	4·1192
		Impl. Yds.	Miles.
2000 Ruthen	= 1 Meile	= 8238⅔ „	4·6806

The Lachter = 6 Fuss is divided into 8 Achtel, each of 10 Lachterzoll, and each Lachterzoll of 10 Lachterlinien.

The Decimal System in Measures of Length is being introduced into the country, and Engineers and Surveyors now use it.

MEASURES OF SURFACE.

North German value.	*Systematic name.*	*Approximate English value.*	
			Square Yards.
144 Square Fuss	= 1 Square Ruthe	=	16·96
180 Square Ruthen	= 1 Morgen	=	3054

A Hufe is 30 Morgen or nearly 19 English acres.

MEASURES OF CAPACITY FOR DRY GOODS.

North German value.	*Systematic name.*	*Approximate English value.*		
			Bushels.	Quarters.
16 Metzen	= 1 Scheffel	=	1·5121 or	·189
12 Scheffeln	= 1 Malter	=	18·1452 „	2·26815
5 Malters or 60 Scheffeln	= 1 Last	=		13·60890

MEASURES OF CAPACITY FOR LIQUIDS.

North German value.	*Systematic name.*	*Approximate English value.* Quart.	Gallon.
2 Ossel	= 1 Quart	= 1·0079	or ·251975
60 Ossel	= 1 Anker	=	7·55925
2 Ankers	= 1 Eimer	=	15·1185
2 Eimers	= 1 Ohm	=	30·237
3 Eimers or 1½ Ohm	= 1 Oxhoft	=	45·3555
4 Oxhoft or 6 Ohm	= 1 Fuder	=	181·422

WEIGHTS.

North German value.	*Systematic name.*	*Approximate English value.* Drams Avoir.
10 Corn	= 1 Cent	= ·09407
10 Cents	= 1 Quentche	= ·9407
10 Quentchen	= 1 Loth	= 9·406464
		lbs. Avoir.
30 Loth	= 1 Zollpfund	= 1·102
100 Zollpfund	= 1 Centner	= 110·232

20 Zollpfund = 1 Stein; 3 Centner = 1 Schiffspfund; 40 Centner = 1 Schiffslast.

This Decimal System of Weights, with the *Half-Kilogramme* (500 Grammes) or Zollpfund as its unit, has been or is being adopted in almost all the States of Germany. In Commercial Weights the Zoll-Centner is divided into 100 Pfund, the Pfund into 32 Loth, the Loth into 4 Quentchen, and the Quentche into 4 Pfennige.

Precious stones are weighed by the carat, of which 120 = 9 Quentchen.

SAXONY. (Kingdom of.)

MEASURES OF LENGTH.

The Stab is equal to 2 Ellen, or 4 Fuss 48 Zoll, or 576 Linien. The Fuss is equal to 11·14944 English inches. Since 1841 the Meile Post contains 13241·987 Ellen, and is equal to 4·66 English miles.

MEASURES OF CAPACITY FOR DRY GOODS.

The Wispel of 2 Malter, of 12 Scheffel, of 4 Viertel, of 4 Metzen. The Metz is equal to 1·4463 English gallons, and the Wispel is equal to 8·6778 English quarters.

MEASURES OF CAPACITY FOR LIQUIDS.

The Dresden Kanne is equal to 1·64736 English pint, and the Eimer of 72 Kannen is equal to 14·82624 English gallons.

WEIGHTS.

(SAME AS PRUSSIA.)

HANOVER.

MEASURES OF LENGTH.

Hanoverian value.	*Systematic name.*	*Approximate English value.*
		Inches.
12 Zoll	= 1 Fuss	= 11¼
2 Fuss	= 1 Elle	= 23
		Feet.
3 Ellen or 6 Fuss	= 1 Klafter	= 5¾
		Yards. In.
16 Fuss	= 1 Ruthe	= 5 4
		Miles.
1587½ Ruthen	= 1 Meile	= 4·61016

MEASURES OF SURFACE.

Hanoverian value.	*Systematic name.*	*Approximate English value.*
		Square Yards.
256 Square Fuss.	= 1 Square Ruthe	= 26·12327
120 Square Ruthen	= 1 Morgen	= 3134·79288

MEASURES OF CAPACITY FOR DRY GOODS.

Hanoverian value.	*Systematic name.*	*Approximate English value.*
		Gallons. Bushels.
4 Sechzentel	= 1 Spint	= 1·71408 or ·21426
4 Spint	= 1 Himt	= 6·85632 ,, ·85704
6 Himt	= 1 Malter	= 5.14224
		Quarters.
8 Malter	= 1 Wispel	= 5·14224
16 Malter or 2 Wispel	= 1 Last	= 10·28448

MEASURES OF CAPACITY FOR LIQUIDS.

Hanoverian value.	*Systematic name.*	*Approximate English value.*
		Imperial Pints.
2 Nössel	= 1 Quartier	= 1·714092
		Imperial Quarts
2 Quartier	= 1 Kanne	= 1·714092
2 Kannen	= 1 Stübchen	= 3·428184
		Imperial Gallons.
2 Stübchen	= 1 Viertel	= 1·714092
5 Viertel	= 1 Anker	= 8·57021
8 Viertel	= 1 Eimer	= 13·712736
4 Anker	= 1 Ohm	= 34·28084
1½ Ohm	= 1 Oxhoft	= 51·42126
4 Oxhoft or 6 Ohm	= 1 Fuder	= 205·68504

WEIGHTS.

(SAME AS PRUSSIA—which see).

BRUNSWICK.

MEASURES OF LENGTH.

The Fuss of 12 Zoll or 144 Linien, the Ruthe of 16 Fuss, and the Meile of 26 Fuss. The Zoll = 11·235 Lines; the Fuss

= 11·235 inches; the Ruthe = 179·76 inches or 14·98 feet; the Meile = 4·61302 miles English. The Ruthe is also divided decimally. The Lachter is 80 Zoll 8½ Linien.

MEASURE OF SURFACE.

The square Ruthe. The Morgen in arable land of 120, or in forest land of 160 square Ruthen.

CUBIC MEASURE.

A Malter of wood is 80, and a Karre of charcoal 100 cubic Fuss. A cubic Fuss = ·8206831 of an English cubic foot.

MEASURES OF CAPACITY.

For dry goods.—The Wispel of 4 Scheffeln or 40 Himten, and Hint of 4 Vierfass 16 Metzen. The Wispel = 4·2844 British imperial quarters. *For liquids.*—The Oxhoft (of 6 Anker or 60 Stubchen, or 240 Quartier) = 197·76 English imperial gallons, and the Quartier = 1·64800 English imperial pints.

WEIGHTS.

(SAME AS PRUSSIA).

OLDENBURGH.

MEASURES OF LENGTH.

The Fuss of 12 Zoll, or 144 Linien = 11·649 English inches. The New Ruthe is 18, and the Old Ruthe 20 Fuss. The Meile of 33357 Fuss = 6·13282 English miles. There is also the Geographical Mile of 25079 Fuss = 4·610878 English miles.

MEASURES OF SURFACE.

The Jück = 160 New Square Ruthen of 324 Square Fuss. The Morgen = 350 Old Square Ruthen of 400 Square Fuss. Thus the Jück contains 51,840 and the Morgen 140,000 Fuss.

MEASURES OF CAPACITY.

For dry goods.—The Last of 12 Malters each, of 1½ Tonne each, of 8 Scheffel each, of 16 Kannen each, of 4 Ort. The Last = 11·29248 British imperial quarts. *For liquids.*—The Oxhoft of 6 Anker each, of 26 Kannen each, of 4 Ort. The Kann = 1·20936 British imperial quarts. For beer, there is the Tonne of 4 Henkeman each, of 28 Bierkann. The Bierkann = 1 ·25455 British Imperial quarts.

WEIGHTS.

(SAME AS PRUSSIA).

SAXE-COBURG GOTHA.

Length.—Fuss of 12 Zoll each, of 12 Linien = **11**·3238 English inches, or ·2876 mètre. Elle = ·61532 English yard, or ·56264 mètre. Ruthe, land measure, = 14 Fuss. Ruthe, forest measure, = 16 Fuss. Lacheter is 7 Saxony Fuss. *Surface.*—Acker = 140 Square Ruthen, land measure, or 160 Square Ruthen, forest measure. Hufe, divided into ½, ¼, ⅛, = 30 Acker. *Cubic measure.*—Klafter, for wood, = (6 × 6 × 3 =) 108 cubic Fuss = ·842097 English cubic foot, or **2**·4389 cubic mètres. *Capacity. (a) dry goods.*—Malter of 2 Scheffel each, of 2 Viertel each, of 4 Metzen each, of 4 Mässchen each, of 4 Nössel = ·6084 British imperial quarter, or **176**·464 litres. Scheffel = ·30342, and the Viertel = ·15171 British imperial quarter, or **88**·232, and **44**·116 litres respectively. Metzen = **2**·42736 British imperial gallons, or **11**·029 litres. Mässchen = **2**·42736 British imperial quarts, or **2**·75725 litres. (*b*) *Liquids.*—Ohm of 2 Eimer, each of 40 Kannen, each of 2 Mass, each of 2 Nössel = **32**·028466 British imperal gallons, or **145**·52 litres. Eimer = **16**·014233 British imperial gallons, or **72**·76 litres. Kanne = **1**·60142 British imperial quart, or **1**·819 litre. Maas = **1**·60142 British imperial pint, or ·9095 litre. Nössel = ·80071 British imperial pint, ·45475 litre. Oxhoft, (wine) of 3 Eimer, each of 2 Anker = **48**·042699 British imperial gallons, or **218**·28 litres. Feuillette of 1½ Eimer or 3 Anker = **24**·0163995 British imperial gallons, or **109**·14 litres. Muid of 3 Oxhoft = **144**·128097 British imperial gallons, or **384**·84 litres. Pipe of 2 Oxhoft = **96**·085398 British imperial gallons, or **256**·66 litres. Both of 2 Oxhoft = 112½ Gotha Kannen = 180 Prussian quarts, (= 1 Prussian Oxhoft) and so 5 Gotha Kannen are reckoned equal to 8 Prussian quarts. The Gotha Kanne is exactly 132⅛ Gotha Cubic Fuss. Fass (of brandy) of 110 Kannen = **44**·03918 British imperial gallons, or **200**·090 litres. *Weights.*—Same as Prussia for Custom's duties, but in trade there are the Pfund of 32 Loth, each of 7 Quentchen = **1**·031144 lb. av., or **467**·7113 Grammes, and the Centner of 110 Pfund = **113**·42587 lbs. av., or **51**·48824 Kilogrammes.

GERMANY. (South.)

BADEN.

MEASURES OF LENGTH.

The Fuss (10 Zoll, 100 Linien, 1000 Punkte) = 11·81123 English inches. The Elle (2 Fuss) = 1·96853 English feet. The Ruthe = 10 Fuss.

In *surface measures* the Morgen of 4 Viertel, each of 100 square Ruthen, each of 100 square Fuss = ·8896 of an English acre. In *cubic measure* a Klafter = (6 × 6 × 4 =) 144 cubic Fuss.

MEASURES OF CAPACITY.

For liquids.—The Fuder of 10 Ohm, each of 10 Stützen, each of 10 Maas, each of 10 Glass. The Maas = 1·3204 British imperial quart, and the Ohm = 330·140 British imperial gallons. *For dry goods.*—The Zuber of 10 Malter, each of 10 Sester, each of 10 Maaslein = 41·2679 British imperial bushels.

WEIGHTS.

The Pfund of 10 Zehnling, each of 10 Centas, each of 10 Pfennig, each of 10 As = 1·1023 lb. av., or half a Kilogramme.

BAVARIA.

MEASURES OF LENGTH.

The Fuss of 12 Zoll, each of 12 Linien = 11·4907 English inches. The Klafter = 6 Fuss. The Ruthe = 10 Fuss. The Elle = 2 Fuss 10½ Zoll. Surveyors divide the Fuss into 10 Zoll, each of 10 Linien.

In surface measures the square Ruthe, and the Morgen or Juchert or Tagwerk of 400 square Ruthen. The square Ruthe of 100 square Fuss, and the Tagwerk of 400 square Ruthen. The Tagwerk = ·842063 English acre.

Measures of capacity for *dry goods.*—The Metz of 2 Viertel or 8 Maaslas or 32 Dreisigers = 1·0196 English bushels. A Schäffel is 6 Metzen, and a Muth is 4 Schäffel. *For liquids.*—The Fass of 25 Eimer each of 64 Maaskannen. The Maaskanne = ·23529, and the Fass 376·464 British imperial gallons.

WEIGHTS.

The Pfund is 32 Loth of 4 Quentchen, and = 1·23457 lb. av. The Centner = 100 Pfund.

WURTEMBURG.

MEASURES OF LENGTH.

The Fuss of 10 Zoll, each of 10 Linien, each of 10 Punkte = 11·27 English inches. The Ruthe of 10 Fuss = 9·39 English feet. The Elle of 2·144 Fuss = 2·015 English feet. The Meile is 26,000 Fuss, and equals 4·6285 English miles.

The *measures of surface* are the square Ruthe = 86·222 English square feet, and the Morgen of 384 square Ruthen.

MEASURES OF CAPACITY.

For *dry goods* the Scheffel of 8 Simris, or 32 Vierling, or 256 Eckleins = 4·875 English bushels. *For liquids*,—The Fuder of 6 Eimer or 96 Imis or 960 Maas = 388·156 English imperial gallons.

WEIGHTS.

The Pfund of 32 Loth each, of 4 Quentchen = 1·03115 lb. av. English. The Centner is 100 heavy, or 104 light Ffund. The Zollpfund, with its divisions as in Prussia, is also used.

HESSE-DARMSTADT.

MEASURES OF LENGTH.

The Fuss of 10 Zoll or 100 Linien = 9·8426 English inches. The Klafter is 10 Fuss.

For *surface measures*, the Morgen of 400 square Klafter each, of 100 square Fuss = ·6178 English acre.

In *measures of solidity*, the Stecken = 5 × 5 × 4 Fuss = 100 Cubic Fuss.

MEASURES OF CAPACITY.

For *dry goods*.—The Malter of 4 Simmers or 16 Kumpfs or 64 Gesheids or 256 Maaschen = ·4402 English imperial quarter. For *liquids*.—The Ohm of 20 Viertel or 80 Maas or 320 Schoppen = 35·2 British imperial gallons. The Maas = 2 French Litres.

WEIGHTS.

The Pfund of 32 Loth, each of 4 Quentchen = ½ Kilogramme, or 1·10230 lb. av. English.

HAMBURG.

Length.—The Fuss of 12 Zoll each, of 8 Achtel = 11·282 English inches; Elle = 2 Fuss; Klafter = 6 Fuss; Ruthe = 12 Fuss. The Brabant Elle, used for cloths, = 2·2565 English feet; 5 Brabant Elle = 6 Hamburg Elle; the Marsch-ruthe = 14 Fuss; Geest-ruthe = 16 Fuss. *Surface*.—Morgen = 600 square Marsch-ruthen or 117600 square Fuss = 2·3865 English acres. *Capacity* (*a*) *dry goods*.—The Last of 3 Wispel, each of 10 Scheffel, each of 2 Fass, each of 2 Himten, each of 4 Spint, each of 4 large or 8 small Mäas = 11·3406 British imperial quarters. Fass = 1·51208 British imperial bushels. (*b*) *Liquids*.—The Stubchen of 2 Kannen or 4 Quartier or 8 Ossel = 3·18940 British imperial quarts. Viertel of 2 Stubchen; Eimer of 4 Viertel, and the Anker of 5 Stubchen;

the Ohm of 4 Anker, and the Fuder or Tonneau of 6 Ohm. *Weights.*—The new Metric Pfund (½ Kilogramme) of 10 Unzen, each of 10 Quinten, each of 10 Half-grammen = 1·10232 lb. av. English. The Centner is 100, and the Lass 6000 Pfund. For weighing gold there is the Cologne Mark (of 24 carats, each of 12 grains) = 30·0264 Troy grains.

BREMEN.

Length.—The Fuss of 12 Zoll = 11·39196 English inches. The Elle is 2, the Klafter 6, and the Ruthe 16 Fuss. Surveyors and engineers divide the Fuss into 10 Zoll of 10 Linien. *Surface.*—The Morgen of 120 square Ruthen, each of 256 square Fuss, each of 144 (or 100 decimal) square Zoll = 3082·240 English square yards, or ·636826 acre. *Solidity.*—The cubic Fuss of 1728 cubic Zoll (or 1,000 cubic decimal Zoll) = ·857 of an English cubic foot, and the Faden of 72 cubic Fuss = 61·704 English cubic feet. *Capacity* (*a*) *dry goods.*—The last of 40 Scheffelen, or 160 Viertel, or 640 Spinte = 10·194 English imperial quarters. (*b*) *Liquids.*—The Oxhoft of 6 Anker, each of 5 Viertel = 46·800 British imperial gallons. The Viertel of 2¼ Stubchen, each of 4 Quartier, each of 4 Mingeln = 1·560 British imperial gallon. *Weights.*—Same as Hamburg.

LUBEC.

Length.—The Fuss of 12 Zoll, each of 12 Linien = 11·3238 English inches, or ·94365 foot. The Elle = 2 Fuss; Ruthe = 16 Fuss; Meile (2,000 Ruthen) = 10065⅝ yards, or 5·71909 miles English. *Capacity* (*a*) *dry goods.*—The Last of 8 Drömt, or 24 Tonne, or 96 Scheffel, or 384 Fass. The rye and wheat Scheffel = ·11931, and the oats' Scheffel = ·13589 British imperial quarter. (*b*) *Liquids.*—The Fuder of 6 Ohm, or 24 Anker, or 120 Viertel, or 240 Stubchen = 192·144 British imperial gallons. The Stubchen = 3·20240 British imperial quarts, the Viertel = 1·6012, and the Oxhoft = 8·0060 imperial gallons English. *Weights.*—The Pfund of 32 Loth, each of 4 Quentchen = 1·0725, and the Centner of 112 Pfund = 120·120 lbs. av. English, or 1·0725 cwt.

SPAIN.

The *Weights and Measures* are the same as those of France, but the old Spanish Weights and Measures are occasionally referred to; these are as follows:—*Length.*—Pies de Burgos of 12 Pulgadas, of 12 Lineas = 11·128 English inches; Vara is 3

Pies; Estado is 2, the Estadal 4, and the Passo 5 Varas; the Vara is also divided into 4 Palmos, each of 12 Dedos or 9 Pulgadas; the Cuerda is 33 Palmos; the Codo is ⅔ of the Vara. The Castilian Legua is 5,000, and the Spanish Legua 8,000 Varas; the former = 2·634, and the latter 4·215 English miles. The Geographical Legua = 7603·84 Varas, and the Legua Maritima = 6653·36 Varas. *Surface.*—The square Estadal of 16 square Varas or 144 square Pies = 13·7589 English square yards; Fanegada of 576 square Estadals; Yugada = 50 Fanegadas. *Capacity* (*a*) *dry goods.*—Cahiz of 12 Fanegas, of 12 Celemines (or Almuezas), or 48 Cuartillos = 2·32 British imperial quarters. (*b*) *Liquids.*—The Cantara or Arroba-mayor of 8 Azumbres, or 32 Cuartillos = 3·54 British imperial gallons; Moyo = 16 Cantara; the Arroba-menor (for oil) of 4 Cuartillos, each of 25 Panillos = 2·77 British imperial gallons. *Weights.*—Libra of 2 Castilian Marcos; 16 Onzen, 128 Ochavos or 256 Adarmes = 1·01442 lb. av. English. The Adarme is divided into 3 Tomines, each of 12 Granos. Quintal = 100 Libras (4 Arrobas of 25 libras).*

GIBRALTAR.

Weights and Measures chiefly those of Great Britain.

PORTUGAL.

(SAME AS FRANCE).

HOLLAND.

Same as France. El = Mètre; Palm = Décimètre; Duim = Centimètre; Streep = Millimètre; Roede = Decamètre; Mijl = Kilomètre; Bunder = Hectare; Kan and Kop = Litre; Maajte = Decilitre; Vingerhoed = Centilitre; Scheppel = Decalitre; Vat or Ton, and Mud or Zak = Hectolitre; Last = 30 Mudden Pond = Kilogramme; Ons = Hectogramme; Lood = Décagramme; Wigtje = Gramme; Korrel = Décigramme.

BELGIUM.

(SAME AS FRANCE).

DENMARK.

Length.—Fod of 12 Tommer of 12 Linier = 11·692 English inches; Alen = 2 Fod; Favn = 3 Alen; Rode = 2 Favn;

* Tonelada = 10 Quintals of 100 Kilogrammes each.

Meile = 2000 Rodeor about 4·136 miles English. Surveyors use decimal divisions and multiples of the Fod. *Surface and solidity.*—The squares and cubes of the measures of length. The land Tönde is 1400 square Alen; 11 Tönder = about 15 English acres. A Favn of firewood is 6 × 6 × 2 Fod = 72 cubic Fod. *Capacity (a) dry goods.*—The Læst of 22 Tönder each, of 4 Fjerdingkar, each of 2 Skepper, each of 18 Potter = 11·57805 British imperial quarters. The Skeppe = 4·2102 British imperial gallons. (*b*) *Liquids.*—Pot of 4 Pægle = 1·8712; Flask of 3 Pægle = 1·4034 British imperial pints. A Kande is 2, a Viertel 8, and an Anker 38 Potter. A Fad is 4 Oxehoveder, each of 6 Anker. *Weights.*—Pund of 100 Kvinten, each of 10 Ort = ½ Kilogramme = 1·023 lb. av. English; Centner = 100 Pund.

SWEDEN.

Length.—Fot of 10 Tumer, each of 10 Linier = 11·6893 English inches; Stäng is 10 Fot; Ref is 10 Stänger or 100 Fot; Meile of 360 Ref or 36000 Fot = 6·64164 English miles. *Surface and cubic measures* are the squares and cubes of the measures of length. *Capacity.*—Cubic Fot of 10 Kannas, each of 100 cubic Tumen, each of 1000 cubic Linier. *Weights.*—Skalpund 100 Ort, each of 100 Korn = ·937 of a lb. av. English; a Centner = 100 Pund; a Ny-last = 100 Centner.

NORWAY.

Length.—Fod of 12 Tommer of 12 Linier = 12·3563 English inches; Alen of 2 Fod; Favn of 3 Alen; Mil of 600 Favn or 36000 Fod = 7·020624 English miles. The other measures and weights are the same as Denmark; but the decimal system is being introduced.

SWITZERLAND.

Length.—Fuss of 10 Zoll, each of 10 Linier, each of 10 Striche = 11·811237 English inches or 3 Décimetres; the Klafter is 6, and the Ruthe is 10 Fuss. An Ell, also called Brache or Half-staab, is 2 Fuss; a Staab is 4 Fuss; the Schweizerstunde of 1600 Ruthen = 2·98263 English miles. *Surface.*—Juchart of 400 square Ruthen, each of 100 square Fuss; the square Klafter of 36 square Fuss, each of 100 square Zoll; the Juchart = 4305·766 English square yards or ·88962 of an acre. 6400 Jucharten = 1 square Stunde = 5693·56800 English acres. *Solidity.*—The cubic Ruthe of 1000 = 953·56321 English cubic feet, and the cubic Klafter of 216 cubic Fuss =

205·922514 feet. *Capacity (a) dry goods.*—The Malter of 16 Maas or 100 Imi = 33·015 British imperial gallons. *(b) Liquids.*—The Maas or Pot = 1¼ Litres = 1·3206 imperial quarts; Halbmaas = 1·3206, and the Schoppe = ·6603 imperial pint; Saum = 100 Maas. *Weights.*—Pfund of 16 Unzen or 32 Loths or 128 Quntli, also divided into 500 Grammes = 1·10233 lb. av. English.

ITALY.

The Weights and Measures are the same as those of France, but in Naples and Tuscany the old Weights and Measures are still often used. (See Naples and Tuscany.)

PAPAL STATES. (Rome.)

Length.—Piede = 11·72 English inches; Passo of 5 Piedes = 58·60 English inches; Mercantile Canna, of 8 Palmi or 24 Partis = 78·35 English inches, or 1·99263 metre; Architects' Canna of 7½ Piedes or 10 Palmi, 87·96 English inches, or 2·2319 mètres; Canna d'ara of 9 Palmi = 74·27213 English inches, or 1·125 mètre. Architects' Palmo, of 12 Oncie, or 60 minutes, or 120 décimes = 8·776 English inches, or ·22319 mètre; Stajuolo of 5¾ Architects' Palmi = 1·404916 English yards, or 1·28463 mètre; the Catena of 10 such Stajuoli = 14·04916 English yards, or 12·8463 mètres; Architects' Pas = 3 Architects' Palmi. Mercantile Braccio = 26·3784393 English inches, or ·670 mètre; Braccio for cloth and linen = 25·00045165 English inches, or ·635 mètre; Braccio d'Ara = 29·5280925 English inches, or ·75 mètre. The Miglio of 5000 Piedes = 1627·783 English yards, or 7½ furlongs, or 1·48793 kilomètres; a Post is 2 Miglio. *Surface.*—Rubbio of 4 Quartas, each of 4 Scorzi, each of 2 Quartucci = 4·5648 English acres, or 184·83 French ares. *Capacity (a) dry goods.*—Corn Rubbio of 4 Quarta, or 12 Stajas, or 16 Starelli, or 22 Scorzi, or 88 Quartucci = 8·1008 British imperial bushels, or 2·9446 hectolitres. *(b) Liquids.—Wine.*—Barile of 32 Boccali, each of 4 Foglietti = 12·8384 British imperial gallons, or 58·3416 litres. *Oil.*—Barile of 28 Boccali each, of 4 Foglietti = 12·651289 British imperial gallons, or 57·4806 litres. Soma of 80 Boccali = 36·14654 British imperial gallons, or 164·23 litres. The Soma is also divided into 2 Pillis (or Mastelli), each of 10 Cugnatelli. *Weights.*—Libbra of 12 Oncie, each of 24 Denari each, of 24 Grani = ·74771 lb. av. English, or 339·16 Grammes; Decino = 10 Libbri; Centinajo (or Cantaro Piccolo) = 100 Libbri; Migliago (or Cantaro-Grosso) = 1000 Libbri.

THE TWO SICILIES. (1st Naples—2nd Sicily.

(1) NAPLES.

Length.—Palmo of 10 Decimes, of 10 Centesimos (or of 12 Oncie of 5 Minutos) = 10·41552 English inches, or ·86796 foot, or ·26455 mètre; Passo of 7 Palmi = 6·07572 English feet, or 1·85185 mètre; Miglio of 1000 Passos = 2025·24 yards, or 1·15411 English mile, or 1·85185 kilometre; Canna of 10 Palmi = 8·6796 feet, English, or 2·6455 metres; Pas = 7 Palmi. *Surface.*—Square Canna = 8·3706 square yards, and the Moggio of 100 square Canna = 837·060624 square yards. *Capacity (a) dry goods.*—Tomolo of 2 Mezzetti, or 4 Quarti, also divided into 8 Stapelli, or 24 Misures = 1·52816 British imperial bushels, or 55·5451 litres; Carro of 36 Tomolo. (*b*) *Liquids.*—*Wine.*—Barile of 60 Caraffe = 9·60178 imperial gallons, or 43·625 litres; Botte of 12 Barile; Carro of 2 Botti. *Oil.*—Salma of 16 Stajos, each of 4 Quarti, each of 6 Misuretta = 35·562 British imperial gallons. *Weights.*—Libbra subdivided for gold, silver, and medicines into 12 Oncie, each of 10 Dramme, each of 3 Scrupolos or Trappesi, each of 2 Oboli, each of 10 Grani = ·707164536 lb. av. English, or ·320759 kilogrammes. For Assayers, the Oncie of gold is divided into 24 Carats, and that of silver into 12 Denari, the Carat and Denaro being each subdivided into 100 parts; Rottolo divided into 10 Decimos, each of 100 Trappesi = 1·96430 English lb. av., or ·890997 kilogramme; Cantaro Grosso of 100 Rottoli = 196·430 lbs. av. English, or 89·0997 kilogrammes; Cantaro Piccolo of 100 Libbra = 70·7164536 lbs. av. English, or 32·0759 kilogramme; Tonne of 1140 Rottoli = 2239·302 lbs. av. English, or 1015·736580 kilogrammes = 25 Tomolis of grain.

(2) SICILY.

Length.—Palma = ·8479 English foot, or ·258 Metre; Canna of 8 Palmi = 83·332416 inches; Pasetto of 2 Palmi; Catena of 32 Palmi; Corda of 4 Catena. *Surface.*—Salma of 4 Bisaccos or 16 Tumoli, or 64 Mondellis, or 256 Carrozzis, or 1024 Quarti or 4596 Quartiglis (square Canna). *Capacity* (*a*) *dry goods.*—The Tumolo with the same divisions as the Neapolitan Tumolo = 3·783461 imperial gallons, or 17·19 litres. *Liquids.*—The Botte of 4 Salamis, or 32 Bariles, or 64 Quartaris; the Quartaro = 3·783461 imperial gallons, or 17·19 litres; Tonno of 3 Bottes; Quartaro of 4 Caroffis. *Oil.*—Cafisso = 2·602042 imperial gallons, or 11·82 litres. *Weights.*—Rotolo of 30 Oncie = 1·7492 lb. av. English, or ·79342

Kilogramme; Cantaro of 100 Rotolis = 174·92 lbs. av. English, or ·79342 Kilogramme; Libra of 12 Oncie = ·6996885 lb. av. English, or ·317368 Kilogramme; the Last = 25 Cantaros.

TUSCANY.

Length.—Braccio divided into 20 Soldi, of 12 Denaris, of 12 Puntos, or into 12 Crazies of 5 Quattrini, or 20 Denari = 1·91482 English foot, or ·58365 Mètre; Pasetto = 2 Braccios = 1·276546 English yard, or 1·16726 Mètre; Canna (commercial) of 4 Braccios = 2·553092 English yards, or 2·33460 Mètres. Canna (surveyors') of 5 Braccios = 3·191366 English yards, or 2·91825 Mètres. The Miglio of 2833⅓ Braccios = 1·027561 English mile, or 1·65367 Kilogramme. *Surface.*—Quadrato of 100 Tavalos or 10,000 square Braccios = ·84178 English acre, or ·34065 Hectare. *Capacity (a) dry goods.*—Moggio of 8 Sacci, or 24 Staja, or 48 Mini = 2·0112 British imperial quarters; the Mine contains 2 Quarti of 8 Mezzetts, of 2 Quartucci, or 4 Bassali. (*b*) *Liquids.*—Barile of 20 Fiaschi, of 2 Boccali, each of 2 Mezetti, each of 2 Quartucci = 10·03280 imperial gallons, or 45·584 Litres. The Barile of Oil is only 16 Fiaschi. *Weights.*—Libbra of 12 Oncie, each of 8 Dramme, each of 3 Denari or 72 Grani = ·74855 lbs. av. English, or ·33954 Kilogramme; Cantaro of 100 Libbre, and the Migliajo of 10 Cantaros.

TURKEY.

Length.—Pike or Drâ of 24 Kerats, in commerce reckoned as 27 English inches or ·68579 metre. There are three kinds of Pike, viz., Drâ = 27, Halebi or Archin = 27·9, and Endassè = 25·68816 English inches. Berri = 1·0386 English mile; Agatsch or Farsang of 3 Berri. *Surface.*—Square Kerat and Pike; Cane or Reed of 5½ Pikes; Feddan = as much as a yoke of oxen can plough in one day. *Capacity* (*a*) *dry goods.*—Killow of 2 Jubbehs, of 2 Sa, of 5½ Rottols, of 12 Okiejehs or 900 Dirhems = 35·27 Litres or 3·88096 British imperial pecks; Fortin = 4 Killows. (*b*) *Liquids.*—Almud of 8 Oke, of 5½ Okiejehs = 1·152 British imperial gallons. The Rottol of 12 Okiejehs = 2·5134 British imperial pints, and the Cantar = 100 Rottols. *Weights.*—Oke of 4 Okiejehs = 400 Dirhems = 2·83418 lbs. av. English or 1·28554 Kilogramme; Cantar of 44 Okes or 100 Rottolos = 124·70392 lbs. av. English, or 56·56378 Kilogrammes; Rottolo = 1·2470392 lbs. av. English, or ·5656378 Kilogramme.

GREECE.

Weights and measures are the same as those of France (see France). *Length.*—Pecheus is Mètre, Palamè is Décimetre, Daktylus is Centimetre, Gramme is Millimetre, Stadion is Kilometre, and Skoinis is Myriametre. *Surface.*—Stremma is Are. *Capacity for dry goods and liquids.*—Koilon is Hectolitre, Litra is Litre, Kotylé is decilitre, Mystron is Centilitre, and Kybos is Millilitre. *Weights.*—Mnâ is Kilogramme, Drachmé is Gramme, Obolos is Decigramme, and Kokkos is Centigramme. Talanton = 1¼ Quintal, or **330**·699 lbs. av., and the Tonos of 10 Talanta = 1¼ Tonneaux, or **3306**·9 lbs. av. English, or **29**·52669 cwt.

CHINA.

Length.—Chih of 10 Tsun, each of 10 Fun = $14\frac{1}{10}$th English inches; Chang of 10 Chih = 11·75 feet English, and the Yin of 10 Chang. The Chih above given is the Canton customs' Chih—the standard adopted in the tariff settled between Great Britain and China. It is the legal measure at all the ports of trade; its use is becoming more general, and it may be ultimately adopted as the universal standard of length. The itinerary measure is the Lí of 360 Pú each of 5 Chih, each of 20 Lí (or 5 Tsun), each of 5 Fun. The Lí = about **486**·176 English yards. The length of the Lí has varied at different periods from 386 to about 631¼ English yards; its average length may be taken as a little less than ⅓rd of an English mile. *Capacity* (*a*) *dry goods.*—Tau of 10 Shing, each of 10 Koh = 1·13 British imperial gallons. The size of the Tau differs considerably in different places, thus there is the Granary Tau (Tsang Tau) just given, the Market Tau (Shi Tau or Shi Kin Tau) = about 1·63 British imperial gallons, and the Swang Tau = about 2·26 British imperial gallons. At Macas the Shing is a little less than 1 British imperial pint. At Canton, in 1840, of 2 Shings then examined 1 contained 1·72, and the other ·919 of a British imperial pint. At Shanghai three specimens of the Shing were found to contain respectively 1·85, 1·87, and 1·33 British imperial pints. (*b*) *Liquids.*—Measures containing definite weights are used for spirits and oil; the most usual sizes contain 1, 2, 4, and 8 Taels' weight. There are also large earthenware measures containing 60, 30, and 15 Catties, these are always of the same size and contain the same weight of liquids of the same specific gravity. *Weights.*—Tan or Pecul of 100 Kin or Catties, each of 16 Leang or Tael = 133⅓ lbs. av. of English. The Tael is nominally divided into 10 Liu of 10 Shu, the Shu being the weight of a shelled millet ed. There are also some nominal multiples of the Kin, viz.,

the Yin of 2 Kin, the Kiun of 30 Kin, the Shi of 120 Kin. The Shi is often used to denote the same weight as the Tan or Pecul, viz., 100 Kin. For weighing gold, silver, and medicines, the following subdivisions of the Tael are used:—Tael of 10 Tsien, each of 10 Fan or Candareen, each of 10 Le or Cash.

English Avoirdupois Weights expressed in Chinese Commercial Weights.

English.		*Chinese.*	*English.*		*Chinese.*
1 Oz.	=	¾ of a Tael or 7½ Mace	1 Quarter	=	21 Catties
			1 Cwt.	=	84 ,,
4 ,,	=	3 Taels			
1 lb.	=	12 Taels or ¾ of a Catty.	1 Ton	=	16 Peculs, or 80 Catties.

INDIA.

(1 BENGAL—2 MADRAS—3 BOMBAY).

(1) BENGAL.

Length.—Guz of 2 Hât'hs, of 2 big Hât'hs, of 12 Ungulees, or 3 Jow or Jaub = 36 English inches. Danda or fathom of 2 Guz = 2 yards English; Coss of 2,000 Dandas = $2\frac{3}{11}$ English miles. The Yojan or Jojun of 4 Coss = $9\frac{1}{11}$ English miles. For cloth measure the Guz (= 36 English inches) is divided into 2 Hâth's, each of 8 Gerah, each of 3 Ungulee, each of 3 Jow or Jaub. The native linear measures have no uniform standard. The Hât'h, generally translated cubit, has an average length of 19¼ inches, but in some places it is 18, and in others 20 inches; the Guz differs very much in different provinces, varying from 32 to 39¼ inches; but now that the English measures have become more known the Hât'h and Guz are generally synonymous with the English cubit (18 inches) and yard (36 inches). In the North West Provinces the "Illahi Guz," used in the Government surveys, is 33 English inches, and 3 Guz make 1 Bans or Ganteh, 20 Ganteh make 1 Jarib. *Surface.*—Beegah of 20 Cottahs, each of 20 Gundas, each of 4 Cowries, each of 4 square Hât'hs = 1,600 square yards, or ·33057 acre English. The Cottah is also divided into 16 Chittâks, each of 20 Gandeh. In the North West Provinces the Beejah is divided into 400 square rods, each equal to $68\frac{1}{18}$ square feet English. *Weights.*—Tola = 180 grains Troy; 5 Tolas = 1 Chittâk; 16 Chittâks = 1 Seer = $2\frac{3}{5}$lbs. av.; 5 Seers = 1 Passeeree or Punsarie = $10\frac{2}{5}$lbs. av.; 8 Passeerees or 40 Seers = 1 imperial or Indian Maund = $82\frac{2}{7}$lbs. av. English. Hence 350 Tolas = 9lbs. av.; 35 Seers = 72lbs. av.; 7 Maunds = 576lbs. av., and 49 Maunds = 36 cwt. or 1·8 ton. 1 cwt. English = 54¾ Seers. The old factory Maund,

adopted by the Government in 1787, was exactly ¼cwt. or 74¾ lbs. av. The old Bazaar Maund, subdivided into 40 Seers, was 72½lbs. av. English. In the interior the Seer varies very considerably, thus at Allahbad and Lucknow it is 96 Tolas, at Mirzapore and Benares it is 84 Tolas, and at Hooghly it is 82 Seers. In the Calcutta market there are 2 Maunds in use, namely, the "Imperial" or "Indian" Maund = 82¾lbs. av. and the factory Maund = 74¾lbs. av. For weighing gold and silver the Tola is divided into 12 Mashas, each of 8 Ruttee, each of 4 Dhân, each of 4 Punks. The subdivisions of the Masha are used in stating the fineness as well as the weight of gold and silver. Pure gold or silver is said to be 12 Mashas fine. *Capacity* (*a*) *dry goods.*—Khahoon of 16 Soolis, each of 20 Pallis, each of 4 Raiks, each of 4 Koonkis, each of 5 Chittâks = about **41**·1428 British imperial bushels. (*b*) *Liquids.*—Maund of 40 Seers, each of 16 Chittâks = $8\frac{5}{8}$ British imperial gallons. The Chittâk (supposed to contain about 5 Rupees' weight of oil) = about $2\frac{1}{5}$ fluid ounces English. The measures of capacity are vessels which are supposed to contain definite weights of grain, salt, milk, ghee, spirits, oil, &c., but as the weights differ in different localities so do the measures. Even measures bearing the same name do not always contain the same quantity in every district. The Government has never yet, in Bengal, defined any measures of capacity, although measures of capacity are of more importance than weights, inasmuch as the people live chiefly on grain, and the domestic transactions are mostly in reference to it.*

(2) MADRAS.

Length.—The English foot and yard are now used by almost all native workmen. The native Kole or Artificers' rod, as also the Guz, is about 33 English inches. The Moolum (translated Covid or Cubit) of 24 Ungulums varies from 18 to 21 inches, its average length is 19¼ or 19⅜ inches English. The Baum (translated fathom) is about 6½ feet English. *Nâlli Valli* signifies the distance walked in 24 minutes; it is equal to about 1½ English miles. A Kâdam of 7 Nâlli Valli = about 10 English miles. *Capacity.*—Garce of 80 Paras, each of 5 Mercals, each of 8 Puddees, each of 8 Ollucks = 18·03 British imperial quarters; the Puddee = 1·4424 British imperial quart. *Weights.*—Candy of 20 Maunds, each of 8 Viss, each of 5 Cutcha Seers, each of 8 Pollums, each of 3 Tolas = **493**·7142 lbs. av. English. Tola = 180 Troy grains, and the

* See "*Suggestions for a Uniform System of Weights and Measures throughout India.*" By W. H. Bayley, Esq., of the Madras Civil Service.

Pollum = 540 Troy grains, or 1·2342 oz. av. By commercial usage, the Viss is always considered 3¼ lbs., the Maund 25 lbs., and the Candy 500 lbs., English av. The weights used by jewellers are the Munjadi, (=5 Troy grains), and the Pagoda (=54 Troy grains), or $\frac{1}{10}$th of a Pollum.

(3) BOMBAY.

Length.—Guz of 24 Tussoos = 27 inches English; Hât'h of 16 Tussoos = 18 inches English. Vent'h of 8 Tussoos = 9 inches English, and the Ungulee (2 Ungulees make 1 Tussoo) = 1½ inches English. *Surface.*—Beegah, each of 20 Pund, each of 20 Kutties = ·81136 English acre, 120 Beegah make 1 Chahur. In the Revenue field survey, the English acre is used, subdivided into 40 Goontahs each, of 16 Annas. In the North West provinces, the Beegah = 3025 square yards, or ·6250 acre English. It is divided into 20 Biswa, of 20 Biswansi, of 20 Kachwansi, of 20 Saswansi, of 20 Nanwansi. In Gugerat also the Beegah = ·6250 acre English, and is divided into 20 Vaso, of 20 Vishwasi, of 20 Padat, of 20 Padtal of 20 Khund. *Weights.*—The weights given under the head of Bengal are being introduced, but there are still the following in common use:—Candy of 20 Maunds = 560 lbs. av.; Maund of 40 Seers = 28 lbs.; Seer of 72 Tanks or 30 Pice = 11½ oz. av.; Tank of 4 Mashas = 2$\frac{2}{4\,5}$ drs. av., and the Masha of 8 Ruktica, each of 4 Dhan or Yar. The Candy varies in different districts from 560 to 3055 lbs. av. The Sattara Candy is 3055 lbs. av. The Candy for cotton is 28 Maunds or 7 cwt. English. *Capacity* (*a*) *Grain.*—Muda of 25 Parahs = 14·001 British imperial quarters; the Candy of 8 Parahs, each of 16 Pylees, each of 4 Seers, each of 2 Tipprees = 4·48004 British imperial bushels, or about 20½ cwt. of rice. (*b*) *Liquids.*—Maund of 50 Seers, each of 60 Tolas = 7·7125 British imperial gallons.

EGYPT.

Length.—Pike Draâ or Diraâ of 4 Rubs each of 6 Kirats = 27 English inches; the Gasab of 4 Diraâ = 3 English yards. *Surface.*—Feddan = 400 square Gasab = 1·1019 acre English. *Capacity.*—Daribba of 2 Ardeb, each of 6 Wehbih, each of 2 Queleh. In Alexandria the Ardeb = 7·4557 British imperial bushels, or 271 Litres. In Cario the Ardeb = 4.924619 British imperial bushels; but its value is usually taken in round numbers, as 5 British imperial bushels, or about 182 Litres. The Nubian Ardeb is about the same value as that of Cairo. *Weight.*—Cantar of 100 Rottolos = 98·046 lbs. av. English. The Rottolo is divided into 12 Uckieh, or 96 Meticals, or 144 Dirhems.

CAPE OF GOOD HOPE.

Length.—The measures of length are partly those of Great Britain and partly the old Dutch measures, viz., Rheinland Fuss = 1·030, and Elle = 2·2566 English feet; 4 Elles are reckoned equal to 3 English yards. A Ruthe is 13½ and a Fathom 6 feet. *Surface.*—The English acre and the Morgen are each reckoned equal to 2 English acres. *Capacity.*—The imperial measures of Great Britain are used, but the old Winchester bushel and quarter, the old English wine gallon, and some Dutch measures, are those in most general use. Approximately 33 Winchester bushels are equal to 32 imperial bushels, and 6 old English wine gallons are equal to 5 imperial gallons. The Dutch dry measures in use are the Last of 10 Mudden, of 4 Amsterdam Schepel = 3·9261 British imperial quarters, and the Zak (3 Schepel = 1 Zak) = 18·3648 British imperial gallons, or 2·2956 British imperial bushels. The Schepel = 6·1216 British imperial gallons. The Dutch liquid measures are the Aam of 2 Anker, of 2 Steeknen, of 8 Stoopen, of 2 Mengeln, of 2 Pintjes, of 4 Maatjes = 34·164 British imperial gallons. *Weights.*—The weights in use are the Avoirdupois and Troy weights of Great Britain; the old Amsterdam Pfund of 32 Loth or 128 Drachmen = 1·32376 Troy lbs. or 1·0893 lbs. av. English. 92 old Amsterdam Pfund are reckoned equal to 100 lbs. av. English. There is also the old Dutch Troy Pfund of 2 Morken, or 8 Unzen, or 320 Engelsen = 1·08606 lbs. av. English.

MAURITIUS.

(SAME AS GREAT BRITAIN).

CANADA.

(SAME AS GREAT BRITAIN).

UNITED STATES OF NORTH AMERICA.

The measures of *Length*, *Distance*, *Surface*, and *Solidity*, are the same as those of Great Britain. The measures of *Capacity* are (*a*) *dry goods*:—The Last of 2 Weys, each of 5 Quarters, each of 2 Coombs, each of 4 Bushels, each of 4 Pecks, each of 2 Gallons, each of 4 Quarts, each of 2 Pints. The Gallon =

·969447 British imperial gallon; the Bushel = ·969447 British imperial bushel, and the other measures in like proportion. (*b*) *Liquids.*—The old English wine gallon of 2 Quarts, each of 2 Pints = ·833111 of a British imperial gallon. *Weights.*—The weights are the same as those of Great Britain, but articles formerly sold by the *cwt.*, are now almost always sold by the Centner or Quintal of 100 lbs.

MEXICO.

The weights and measures are the same as those used in Spain, previous to the adoption of the metric system in that country in 1859.

WEST INDIES, BRITISH.

The weights and measures of Length are the same as those of Great Britain, and the measures of Capacity are the old Winchester Bushel, and wine gallon with their subdivisions, but the Imperial gallon and bushel are now also used.

BRAZIL.

(SAME AS PORTUGAL.)

BUENOS AYRES AND THE ARGENTINE CONFEDERATION.

The Standard Weights and Measures are those of the metric system recently introduced, but not yet come into general use. The weights and measures previously used were the Castilian of the Spanish system (see Spain), with some slight variations in name and value, as follows:—*Length.*—Pie of 12 Pulgadas, each of 12 Linies = 11·3652 English inches = 1·03713 old Castilian foot = ·28866 Mètre; Vara of 3 Pies = ·86598 Mètre = 2·8413 English feet = 1·03713 Castilian Vara, Braza = 6 Pies = 5·6826 English feet. The English yard was also often used. Cuadra = 150 Varas = 142·065 English yards; Legua = 40 Cuadra = 5·196 Kilomètres = 3·2287 English miles. *Surface.*—Cuadra Cuadrada of 22,500 square Varas; the Suerta de Estancia of 27,000 square Varas = 5·004 English acres; the Suerta de Chacra* of 10,000 square Varas, the square Legua of 900,000 Cuadra Cuadradas = about 176 English acres.

* There were three varieties of the Suerta de Chacra, that of 10,000, that of 19,600, and that of 25,000 square Varas; the first for cultivated land in the country, the second for cultivated land near towns, and the third for waste land in the prairies.

Capacity (*a*) *dry goods*.—Fanega of 4 Cuartillas or 9,856 cubic Pulgadas = 2·50365 old Castilian Fanegas = 137·2 Litres = 3·77464 British imperial bushels; Last of 2 Toneladas, or 4 Cahices, or 15 Fanegas = 7·07945 British imperial quarters. (*b*) *Liquids*.—Pipa of 6 Bariles, of 4 Canecas, of 8 Frascos, of 2 Medios of 2 Cuartos, of 2 Ochavos = 100·36368 British imperial gallons. *Weights*.—Libra of 16 Onzas, of 16 Adarmes, of 36 Granos = 1·01274 lb. av. English, or ·99833 old Castilian Libra. For gold and silver the Marco of 8 Onzas. Assayers divided the Marco for gold, into 24 Quilates, each of 4 Granos, and each Grano of 8 Partes; and for silver into 12 Dineros, each of 24 Granos. The Marco = 299·684 French grammes, or 3544·525 grains Troy. The apothecaries' Libra, which was ⅔ of the ordinary Libra, and was equal to 344.5254 grammes, was divided into 12 Onzas, each Onza into 8 Drachmas, each Drachma into 3 Escrupulos, each Escrupulo into 2 Ovalos, and each Ovalo into 12 Granos.

APPENDIX.

I.

IRELAND.

In the old Irish currency the denominations of money were the same as those of the United Kingdom, given at p. 2, viz., Pounds, Shillings, and Pence; but British sterling money is greater in intrinsic value by a twelfth part than the late old Irish currency, as is shewn in the following table:—

COMPARATIVE TABLE OF BRITISH STERLING AND IRISH CURRENCIES.

British. £	s.	d.		*Irish.* £	s.	d.
0	0	$\frac{2}{13}$	=	0	0	1
0	0	1	=	0	0	$1\frac{1}{13}$
0	0	3	=	0	0	$3\frac{1}{4}$
7	0	$5\frac{7}{13}$	=	0	0	6
0	0	6	=	0	0	$6\frac{1}{2}$
0	0	$11\frac{1}{13}$	=	0	1	0
0	1	0	=	0	1	1
0	18	$5\frac{7}{13}$	=	1	0	0
1	0	0	=	1	1	8
92	6	$1\frac{11}{13}$	=	100	0	0
96	18	$5\frac{7}{13}$	=	105	0	0
100	0	0	=	108	6	8
105	0	0	=	113	15	0

WEIGHTS AND MEASURES.

MEASURES OF LENGTH.

Irish Value.		*Systematic Name.*		*Metric Value.* Centimetres.
12 Inches	=	1 Foot	=	30·4794
3 Feet	=	1 Yard	=	91·4383
				Metres.
7 Yard	=	1 Perch	=	6·400681
40 Perches	=	1 Furlong	=	256·02724
				Kilometres.
8 Furlongs	=	1 Mile	=	2·0482178

The Irish Mile of 320 Perches or 2,240 Yards = 2·048 French Kilometres, and $5\frac{1}{2}$ Irish Miles = 7 English Miles, or 11 Irish Miles = 14 English Miles.

			Metres.
A Perch in Burleigh or Woodland Measure is	6 Yds.	=	5·486298
,, Cunningham ,,	6¼ ,,	=	5·714894
,, Irish ,,	7 ,,	=	6·400681
,, Forest ,,	8 ,,	=	7·315064

MEASURES OF SURFACE.

Irish Value.		*Systematic Name.*		*Equivalent Value in the Metric System.* Ares.
144 Sq. Inches	=	1 Sq. Foot	=	·000929
9 ,, Feet	=	1 Sq. Yard	=	·008361
49 ,, Yards	=	1 ,, Perch	=	·409687
40 Perches	=	1 Rood	=	16·38748
4 Roods	=	1 Acre	=	65·54992

In Irish Surface Measure, or, as it is also called, Irish Plantation Measure, 121 Acres are equal to 196 British Acres.

36 Acrs. Irish Msre.	=	49 Acrs.	Burleigh or Woodld.	Msre.
64 ,, ,,	=	49 ,,	Forest	Measure.
625 ,, ,,	=	784 ,,	Cunningham	,,
121 ,, ,,	=	196 ,,	British Statute	,,
1369 ,, ,,	=	1764 ,,	Scotch	,,

The above numbers are found by multiplying together the number of yards in a perch in the different kinds of measure. Thus, the Irish perch = 14 half yards, the English perch = 11 half yards; hence 14 × 14 = 196 and 11 × 11 = 121. The chain in Scotland is 74 ft., and the chain in Ireland is 84 ft.; hence (74 ÷ 2) × (74 ÷ 2) = 1369, and (84 ÷ 2) × (84 ÷ 2) = 1764, the equivalent number of Irish and Stotch acres.

The following table will be found useful in reducing Irish Land Measurement to English, Scotch, Woodland, Forest, or Cunningham Surface or Land Measure.

As an instance of the method of using this table, let it be required to find the value of 9,736 Irish acres in English acres. Add together 9 times the numbers in the fourth line, 7 times the numbers in the third line, 3 times the numbers in the second line, and 6 times the numbers in the first line :—

Irish.	*English.*	*Forest.*	*Woodland.*	*Cunningham.*	*Scotch.*
a.	*a. r. p. 10ths*	*a. r. p. 10ths*	*a. r. p. 10ths*	*a. r. p. 10ths*	*a. r p. 10ths*
1	1 2 19 2	0 3 2 5	1 1 17 8	1 1 0 7	1 1 6 2
10	16 0 31 7	7 2 25 0	13 2 17 8	12 2 7 0	12 3 21 6
100	161 3 37 4	76 2 10 0	136 0 17 8	125 1 30 4	128 3 16 5
1000	1619 3 13 6	765 2 20 0	361 0 17 8	1254 1 24 0	1288 2 5 1

Table of Irish Land Measure Reduced to Imperial.

Irish.		*Imperial.*				*Irish.*		*Imperial.*			
a		*a.*	*r.*	*p.*	*y.*	*a.*		*a.*	*r.*	*p.*	*y.*
1	=	1	2	19	5¼	28	=	45	1	16	26
2	=	3	0	38	10½	29	=	46	3	36	1
3	=	4	3	17	15¾	30	=	48	2	15	16½
4	=	6	1	36	21	31	=	50	0	34	11½
5	=	8	0	15	26½	32	=	51	3	13	6¾
6	=	9	2	35	1¼	33	=	53	1	32	22
7	=	11	1	14	6½	34	=	55	0	11	27¼
8	=	12	3	33	11¾	35	=	56	2	31	2¼
9	=	14	2	12	17	36	=	58	1	10	7½
10	=	16	0	31	22¼	37	=	59	3	29	12¾
11	=	17	3	10	27½	38	=	61	2	8	18
12	=	19	1	30	2½	39	=	63	0	27	23¼
13	=	21	0	9	7¾	40	=	64	3	6	28½
14	=	22	2	28	13	41	=	66	1	26	3½
15	=	24	1	7	18½	42	=	68	0	5	8¾
16	=	25	3	26	23¼	43	=	69	2	24	14
17	=	27	2	5	28¾	44	=	71	1	3	19¼
18	=	29	0	25	3¾	45	=	72	3	22	24½
19	=	30	3	4	9	46	=	74	2	1	29¾
20	=	32	1	23	14¼	47	=	76	0	21	4¾
21	=	34	0	2	19½	48	=	77	3	0	10
22	=	35	2	21	24¾	49	=	79	1	19	15¼
23	=	37	1	0	30	50	=	80	3	38	20½
24	=	38	3	20	5	100	=	161	3	37	10¾
25	=	40	1	39	10½	200	=	323	3	34	21½
26	=	42	0	18	15½	300	=	485	3	32	2
27	=	43	2	37	20¾	500	=	809	3	26	23½
						1000	=				

Comparative Table of Rates of Irish and Imperial Land Measure.

Rate per Irish Acre.				*Rate per British Statute Acre.*			*Rate per Irish Acre.*				*Rate per British Statute Acre.*		
£	*s.*	*d.*		£	*s.*	*d.*	£	*s.*	*d.*		£	*s.*	*d.*
0	1	0	=	0	0	7¼	0	15	0	=	0	9	3
0	1	6	=	0	0	11	1	0	0	=	0	12	4
0	2	0	=	0	1	2¾	1	5	0	=	0	15	5
0	2	6	=	0	1	6½	1	10	0	=	0	18	6
0	3	0	=	0	1	10¼	1	15	0	=	1	1	7
0	3	6	=	0	2	1¾	2	0	0	=	1	4	8
0	4	0	=	0	2	5½	2	5	0	=	1	7	9
0	4	6	=	0	2	9¼	2	10	0	=	1	10	10
0	5	0	=	0	3	1	2	15	0	=	1	13	11
0	10	0	=	0	6	2	3	0	0	=	1	17	0

MEASURES OF CAPACITY.

Irish value.		*Systematic name.*
4 Naggins or Gills	=	1 Pint.
2 Pints	=	1 Quart.
4 Quarts	=	1 Gallon.
2 Gallons	=	1 Peck.
4 Pecks	=	1 Bushel.
8 Bushels	=	1 Quarter.
5 Quarters	=	1 Wey.
2 Weys	=	1 Lost.

Bushels, quarters, weys, and tods are used in measuring grain, seeds, fruit, &c.; but these articles are often bought and sold by weight and not by measure.

A bushel of wheat weighs, on an average, 57 to 60 lbs.

,,	barley	,,	,,	,,	47 to 49	,,
,,	rye	,,	,,	,,	55	,,
,,	oats	,,	,,	,,	38 to 40	,,
,,	bere	,,	,,	,,	42	,,

The Act 7th William III. defined the gallon to be of the content of 271¼ cubic inches; the peck being 2 and the bushel 8 such gallons, and the barrel 4 bushels or 32 gallons. The Act 9th George II. defined the gallon for beer, ale, and spirits to be of the content of $217\frac{8}{10}$ cubic inches. It directed that the barrel of ale or beer was not to be under 40, nor the half-barrel under 20 of these gallons. 32 gallons of 271¼ cubic inches each are very nearly equal to 40 gallons of $217\frac{8}{10}$ cubic inches each. The British Imperial gallon, as defined by the Act 5th George IV., has a cubic content of 277·274 cubic inches, and contains 10 lbs. av. of distilled water at a temperature of 62 degrees of Fahrenheit's thermometer.

APPENDIX.

II.

AVERAGE COURSE OF EXCHANGE

FOR THE YEARS 1864, 1865, 1866, 1867, & 1868.

London receives from or gives to.		1864.	1865.	1866.	1867.	1868.
Amsterdam	Short	11·16⅜	11·21	11·17	11·17⅜	11·18½
Amsterdam	3 months	11·77⅜	11·60½	11·71½	11·63½	11·64
Rotterdam	,,	11·76⅛	11·60½	11·81½	11·63⅛	11·72½
Antwerp	,,	25·64½	25·50	25·52½	25·39	25·38½
Brussels	,,	25·64½	25·50	25·52½	25·38⅛	25·39
Hamburg	Short	13·6	13·6	13·9½	——	——
Hamburg	3 months	13·9⅜	13·9⅜	13·9½	13·9⅜	13·9½
Paris	Short	25·24	25·90½	25·19	25·16	25·18¼
Paris	3 months	25·65⅜	25·45½	25·45½	25·34½	25·33½
Marseilles	,,	25·66⅜	25·47	25·47½	25·36	25·35
Frankfort-on-Main	,,	120·½	120·½	120·	120·	120½
Vienna	,,	12·1⅜	11·26½	12·38½	12·82½	11·79½
Trieste	,,	12·2	11·26½	12·39	12·83⅛	11·79⅜
St. Petersburg	,,	31·⅜	30·⅞	28½	31½	32·
Copenhagen	,,	9·11⅜	9·15⅜	9·18½	9·10	9·19
Madrid	,,	47·½	47⅜	46	48½	48½
Cadiz	,,	47·⅜	47⅜	46½	49½	48⅜
Leghorn	,,	25·76½	25·60⅜	26·97½	27·73½	28·18
Milan	,,	25·77½	25·60⅜	26·98	27·73½	28·23½
Genoa	,,	25·77½	25·60⅜	26·98	27·73½	28·23⅜
Naples	,,	25·79⅛	25·60⅜	26·98	27·73½	28·23½
Palermo	,,	25·79½	25·60⅜	26·98	27·73⅜	28·23½
Messina	,,	25·79½	25·60⅜	26·98	27·73⅜	28·23½
Oporto	90 days	51·⅜	51⅛	51½	51⅞	51⅞
Lisbon	,,	51·⅜	51⅛	51½	51⅞	51½
New York	60 days	202·⅜	158·	146⅜	109½	109½
Bombay		2·1⅜	2·0½	2·1½	1·11½	1·11½
Calcutta		2·1⅜	2·0⅜	2·0⅞	1·11⅛	1·11½
Canton		4·10	4·5½	4·7½	——	——
Shanghai		6·8½	6·2½	6·3½	6·1½	6·0⅜
Hong Kong		4·11	4·11	4·6⅜	4·4	4·5½
Buenos Ayres		4·3½	4·1⅜	4.2½	3·11⅜	4·0⅛
Rio Janeiro		2·3⅜	2·1⅛	2·0⅜	1·9½	1·6½
Bahia		2·3½	2·1⅜	2·1⅜	1·9⅞	1·6⅜
Montevideo		4·4½	4·4½	4·4½	4·3½	——
Pernambuco		2·3⅜	2·2⅜	2.2½	1·10	1·6½
Santiago (Chili)		3·8⅛	3·8⅛	3·8⅛	38⅛	38⅛
Lima	90 days	3·1	3·1	3·1	3·1	3·1

AVERAGE COURSE OF EXCHANGE

For the year ending 31st December, 1865.

LONDON receives from or gives to—

Amsterdam ..	Short ..	11	Gulden	21 cents	..	For £1	Sterling.
Amsterdam ..	3 months ..	11	Gulden	60¼ cents	..	„ „	„
Retterdam ..	„ ..	11	Gulden	60½ cents	..	„ „	„
Antwerp ..	„ ..	25	Francs	50 centimes		„ „	„
Brussels ..	„ ..	25	Francs	50 centimes		„ „	„
Hamburg ..	Short ..	13	Marks	6 schillings		„ „	„
Hamburg ..	3 months ..	13	Marks	9 schillings		„ „	„
Paris	Short ..	25	Francs	90¾ centimes		„ „	„
Paris	3 months ..	25	Francs	45⅝ centimes		„ „	„
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Frankfort-on-Main	„ ..	120¾	Florins			„ £10	„
Vienna	„ ..	11	Florins	26¼ cents		„ £1	„
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Madrid	„ ..	47⅜d.	sterling			„ 1 Duro, or Hard Dollar.	
Cadiz	„ ..	47¼d.	sterling			„ „	„
Leghorn.. ..	„ ..	25	Lire	60⅜ cents		„ £1	Sterling.
Milan	„ ..	25	Lire	60⅜ cents		„ „	„
Genoa	„ ..	25	Lire	60⅜ cents		„ „	„
Naples	„ ..	25	Lire	60⅜ cents		„ „	„
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Messina.. ..	„ ..	25	Lire	60⅜ cents		„ „	„
Oporto	90 days ..	51⅛d.	sterling			„ 1 Milreis.	
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